INVENTOR SEARCH

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=> fil capl; d que nos l47
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FILE LAST UPDATED: 4 Feb 2008  (20080204/ED)

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http://www.cas.org/infopolicy.html
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE


L41 (         1)SEA FILE=CAPLUS ABB=ON  US2005-551976/AP
L42             STR
L43 (       693)SEA FILE=REGISTRY SSS FUL L42
L44 (       229)SEA FILE=CAPLUS ABB=ON  L43
L45 (     15399)SEA FILE=CAPLUS ABB=ON  YAMAMOTO H?/AU
L46 (       206)SEA FILE=CAPLUS ABB=ON  DAN N?/AU
L47          12 SEA FILE=CAPLUS ABB=ON  (L41 OR L45 OR L46) AND L44


=> d ibib abs hitstr l47 1-12

L47  ANSWER 1 OF 12  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2007:33981  CAPLUS  Full-text
DOCUMENT NUMBER:          146:131334
TITLE:                    Fluorescent diketopyrrolopyrroles and ct derivatives
INVENTOR(S):              Oka, Hidetaka; Yamamoto, Hiroshi; Tanabe,
                          Junichi
PATENT ASSIGNEE(S):       Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE:                   PCT Int. Appl., 69pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
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     WO 2007003520         A1    20070111    WO 2006-EP63527        20060626
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
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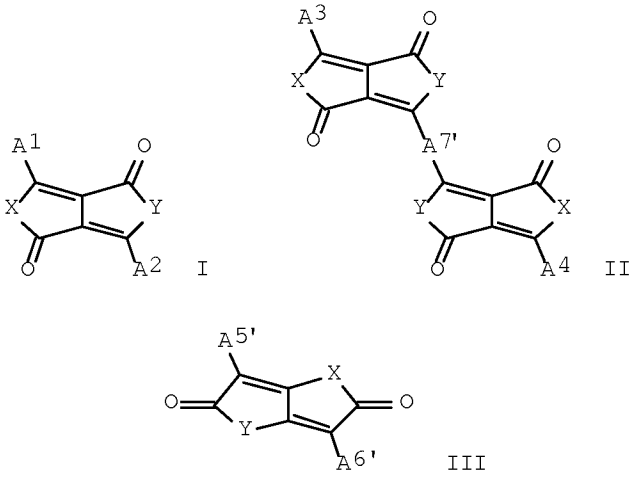
MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: EP 2005-106066 A 20050705
OTHER SOURCE(S): MARPAT 146:131334
GI

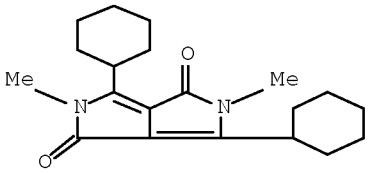


AB The present invention relates to fluorescent compds. of formulas (I), (II), or (III), a process for their preparation and their use for the preparation of inks, colorants, pigmented plastics for coatings, non-impact-printing material, color12 filters, cosmetics, polymeric ink particles, toners, as fluorescent tracers, in color changing media, dye lasers and electroluminescent devices. A luminescent device comprising a compound according to the present invention is high in the efficiency of elec. energy utilization and high in luminance.

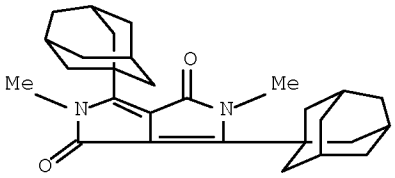
IT 918413-00-0 918413-02-2 918413-03-3
918413-04-4 918413-06-6 918413-07-7
918413-41-9
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(fluorescent diketopyrrolopyrroles and derivs.)

RN 918413-00-0 CAPLUS

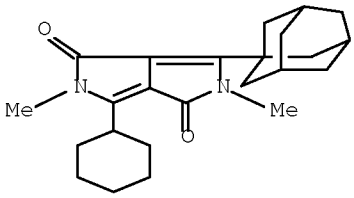
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-dicyclohexyl-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



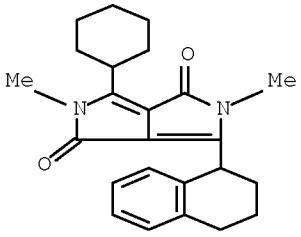
RN 918413-02-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(tricyclo[3.3.1.13,7]dec-1-yl)- (CA INDEX NAME)



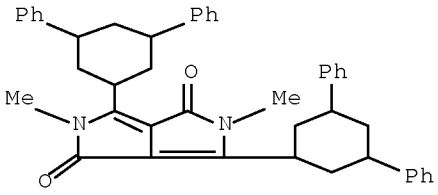
RN 918413-03-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-cyclohexyl-2,5-dihydro-2,5-dimethyl-6-tricyclo[3.3.1.13,7]dec-1-yl- (CA INDEX NAME)



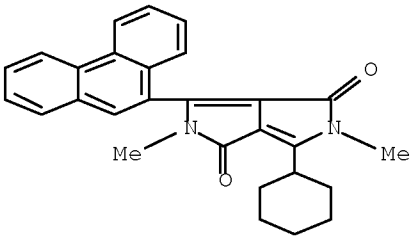
RN 918413-04-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-cyclohexyl-2,5-dihydro-2,5-dimethyl-6-(1,2,3,4-tetrahydro-1-naphthalenyl)- (CA INDEX NAME)



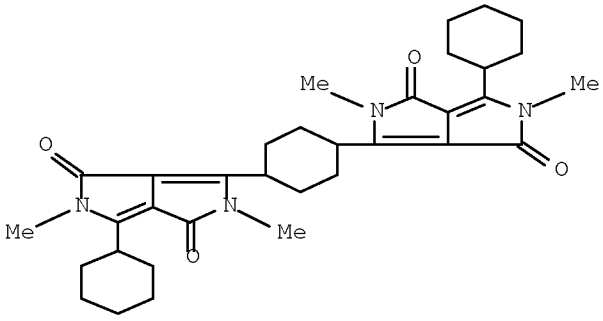
RN 918413-06-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3,5-diphenylcyclohexyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 918413-07-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-cyclohexyl-2,5-dihydro-2,5-dimethyl-6-(9-phenanthrenyl)- (CA INDEX NAME)



RN 918413-41-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,3'-(1,4-cyclohexanediyl)bis[6-cyclohexyl-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:566707 CAPLUS Full-text
DOCUMENT NUMBER: 145:72922
TITLE: Fluorescent diketopyrrolopyrroles and their uses
INVENTOR(S): Yamamoto, Hiroshi; Oka, Hidetaka; Dueggeli, Mathias
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 111 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006061343	A1	20060615	WO 2005-EP56335	20051130
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
CA 2587781	A1	20060615	CA 2005-2587781	20051130
EP 1817392	A1	20070815	EP 2005-850423	20051130
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CN 101072842	A	20071114	CN 2005-80042191	20051130
IN 2007CN02481	A	20070907	IN 2007-CN2481	20070611
KR 2007097494	A	20071004	KR 2007-715716	20070709
PRIORITY APPLN. INFO.:			EP 2004-106432 A	20041209
			EP 2005-103489 A	20050428
			WO 2005-EP56335 W	20051130

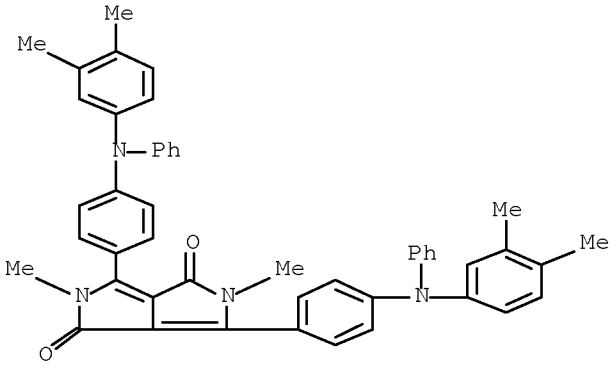
OTHER SOURCE(S): MARPAT 145:72922

AB Fluorescent compds. are described which comprise diketopyrrolopyrrole derivs. and derivs. of compds. comprising 2 diketopyrrolopyrrole moieties linked by a cyclic group, the derivs. having substituents which differ from each other on ≥2 of the C atoms of the diketopyrrolopyrrole ring(s). Fluorescent compns. and compns. of a high mol. weight organic material incorporating the derivs. are described. Electroluminescent devices incorporating the derivs. or the fluorescent compns. including them are also described, as is the use of the derivs. or compns. for the preparation of inks, colorants, pigmented plastics for coatings, non-impact-printing material, color filters, cosmetics, or for the preparation of polymeric ink particles, toners, as fluorescent tracers, in color changing media, and in solid dye lasers, electroluminescent lasers, and electroluminescent devices.

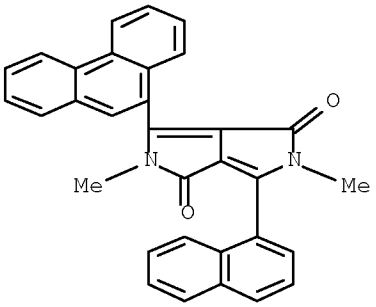
IT 890134-29-9
RL: DEV (Device component use); USES (Uses)
(fluorescent diketopyrrolopyrrole derivs. and their uses)

RN 890134-29-9 CAPLUS

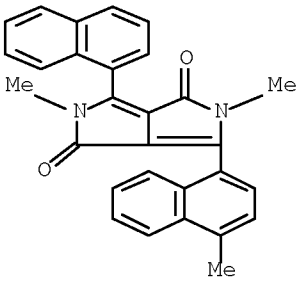
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[(3,4-dimethylphenyl)phenylamino]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



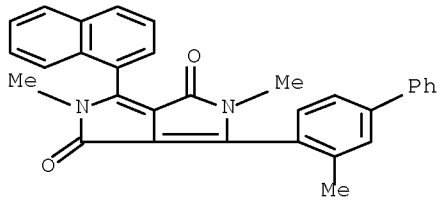
IT 853276-29-6P 890134-23-3P 890134-24-4P
890134-25-5P 890134-26-6P 890134-28-8P
890134-30-2P 890134-31-3P 890134-32-4P
890134-33-5P 890134-35-7P 890134-36-8P
890134-37-9P 890134-38-0P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrrole derivs. and their uses)
RN 853276-29-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(1-naphthalenyl)-6-(9-phenanthrenyl)- (CA INDEX NAME)



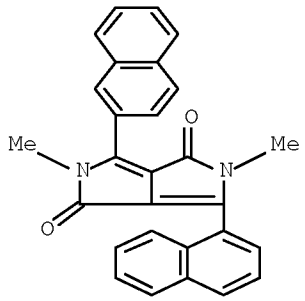
RN 890134-23-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(4-methyl-1-naphthalenyl)-6-(1-naphthalenyl)- (CA INDEX NAME)



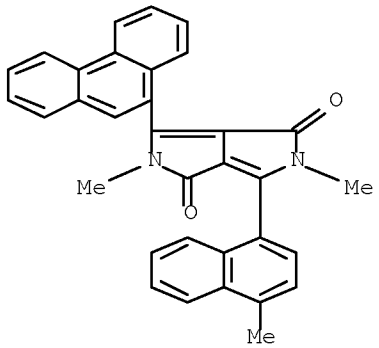
RN 890134-24-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(3-methyl[1,1'-biphenyl]-4-yl)-6-(1-naphthalenyl)- (CA INDEX NAME)



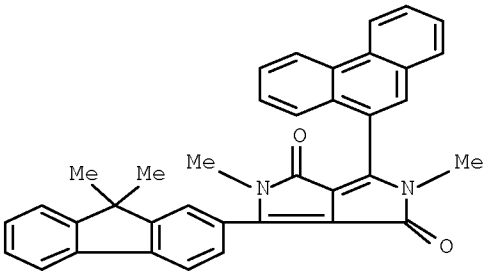
RN 890134-25-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(1-naphthalenyl)-6-(2-naphthalenyl)- (CA INDEX NAME)



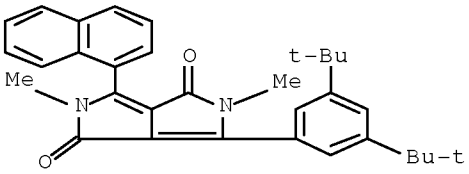
RN 890134-26-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(4-methyl-1-naphthalenyl)-6-(9-phenanthrenyl)- (CA INDEX NAME)



RN 890134-28-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(9,9-dimethyl-9H-fluoren-2-yl)-2,5-dihydro-2,5-dimethyl-6-(9-phenanthrenyl)- (CA INDEX NAME)



RN 890134-30-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[3,5-bis(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



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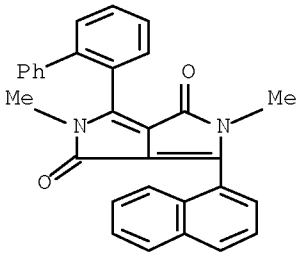
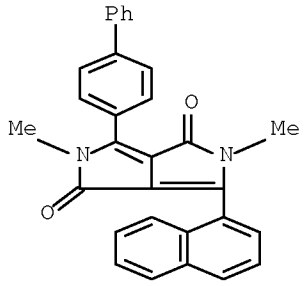
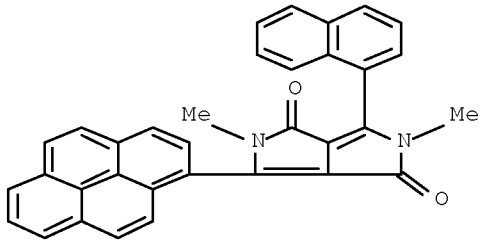
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-biphenyl]-2-yl-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



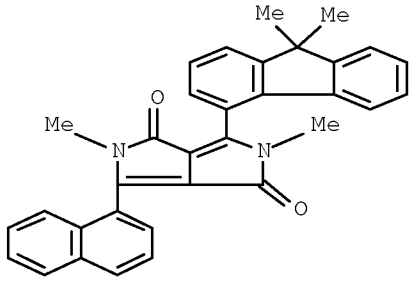
RN 890134-32-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-biphenyl]-4-yl-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



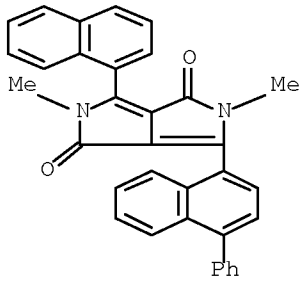
RN 890134-33-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(1-naphthalenyl)-6-(1-pyrenyl)- (CA INDEX NAME)



RN 890134-35-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(9,9-dimethyl-9H-fluoren-4-yl)-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



RN 890134-36-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3-(1-naphthalenyl)-6-(4-phenyl-1-naphthalenyl)- (CA INDEX NAME)



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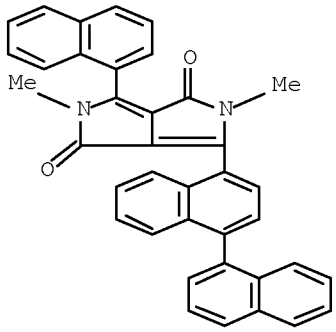
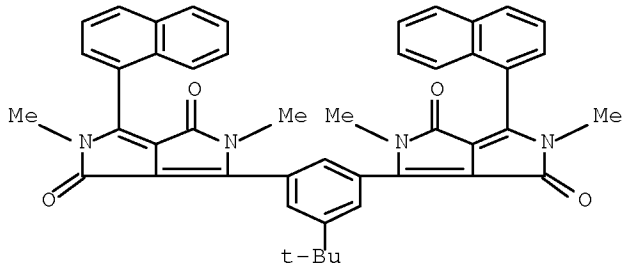
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-binaphthalen]-4-yl-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



RN 890134-38-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,3'-[5-(1,1-dimethylethyl)-1,3-phenylene]bis[2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:29533 CAPLUS Full-text
DOCUMENT NUMBER: 144:138473
TITLE: Fluorescent quinacridones and compositions containing them and their uses

INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa; Van der Schaaf, Paul Adriaan
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006003090	A1	20060112	WO 2005-EP52841	20050620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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EP 1769048	A1	20070404	EP 2005-753878	20050620
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CN 1977029	A	20070606	CN 2005-80021864	20050620
KR 2007043810	A	20070425	KR 2007-702224	20070129

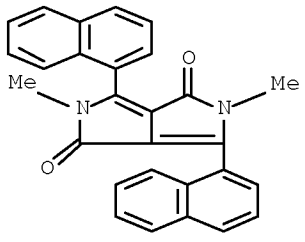
PRIORITY APPLN. INFO.: EP 2004-103025 A 20040629
WO 2005-EP52841 W 20050620

OTHER SOURCE(S): MARPAT 144:138473

AB Fluorescent quinacridone derivs. and guest-host chromophore compns. comprising them in conjunction with diketopyrrolopyrrole host chromophores are described. The use of the derivs for coloring a high mol. weight organic material, as fluorescent tracers, in color changing media, in solid-state dye lasers, electroluminescent lasers and in electroluminescent devices is also described.

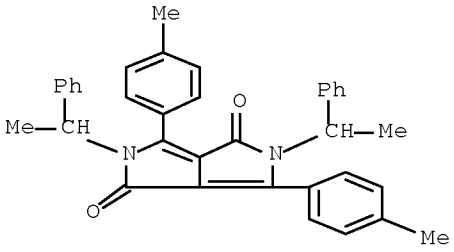
IT 474067-56-6 575451-54-6
RL: DEV (Device component use); USES (Uses)
(fluorescent quinacridones and compns. containing them and their uses)

RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 575451-54-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-2,5-

bis(1-phenylethyl)- (CA INDEX NAME)

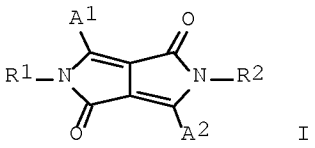


REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:872828 CAPLUS Full-text
DOCUMENT NUMBER: 141:351424
TITLE: Fluorescent diketopyrrolopyrroles
INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004090046	A1	20041021	WO 2004-EP50403	20040401
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1611207	A1	20060104	EP 2004-725051	20040401
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1771298	A	20060510	CN 2004-80009420	20040401
JP 2006524281	T	20061026	JP 2006-505506	20040401
US 2007010672	A1	20070111	US 2005-551976	20051005 <--
MX 2005PA10866	A	20060605	MX 2005-PA10866	20051010
IN 2005CN02934	A	20070608	IN 2005-CN2934	20051109
PRIORITY APPLN. INFO.:			EP 2003-100972 A	20030410
			WO 2004-EP50403 W	20040401

OTHER SOURCE(S): MARPAT 141:351424
GI

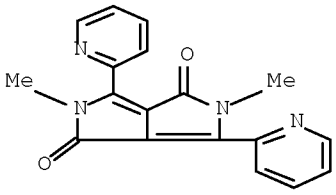


I

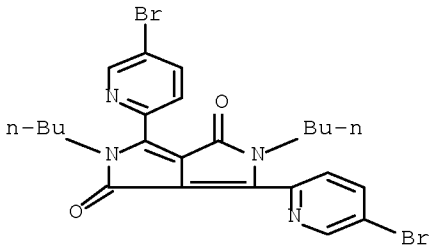
AB Fluorescent diketopyrrolopyrroles I [R1, R2 = (halo-substituted) C1-25 alkyl, (C1-4 alkyl-substituted) allyl, cycloalkyl, (substituted) phenyl-cycloalkyl condensed group, alkenyl, cycloalkenyl, alkynyl, haloalkyl, haloalkenyl, haloalkynyl, ketone or aldehyde group, ester group, carbamoyl, silyl group, siloxanyl, (substituted) aryl, (substituted) heteroaryl, or CR3R4(CH2)mA3; m = 0-4; R3, R4 = H, C2-4 alkyl, or (substituted) Ph; A1, A1 = 5- or 6-membered heterocyclic ring containing 1-3 heteroatoms selected from N,O, and S] are prepared for use as guest and host chromophores in electroluminescent compns., with the absorption spectrum of the guest chromophore overlapping the fluorescent emission spectrum of the host chromophore and the photoluminescence emission peak of the host chromophore being 500-720 nm. A typical I was manufactured by reaction of 27.7 g 5-bromo-2-cyanopyridine 20 h at 100-110° with 16.2 g diisopropyl succinate in tert-amyl alc., and reaction of 2 g intermediate 21 h with 2.4 g BuI in NMP in the presence of tert.-BuOK.

IT 128318-51-4P 777079-51-3P 777079-52-4P
777079-53-5P 777079-54-6P 777079-62-6P
777079-63-7P 777079-64-8P 777079-65-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrroles for electroluminescent compns. based on guest chromophores having absorption spectra overlapping host fluorescent emission spectra)

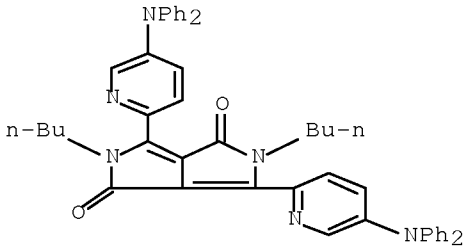
RN 128318-51-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-2-pyridinyl- (CA INDEX NAME)



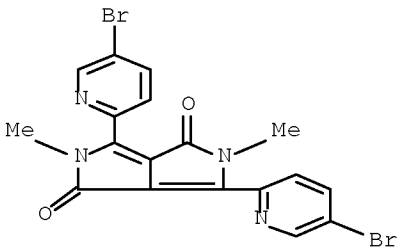
RN 777079-51-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(5-bromo-2-pyridinyl)-2,5-dibutyl-2,5-dihydro- (CA INDEX NAME)



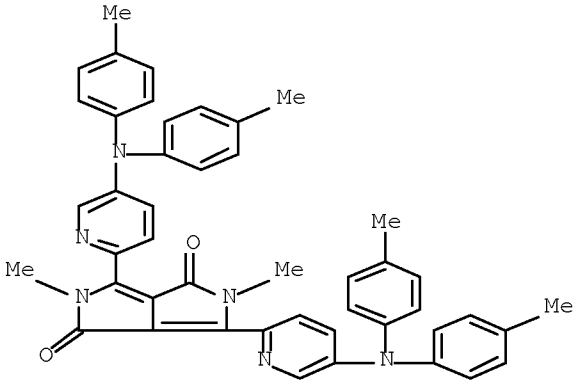
RN 777079-52-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-3,6-bis[5-(diphenylamino)-2-pyridinyl]-2,5-dihydro- (CA INDEX NAME)



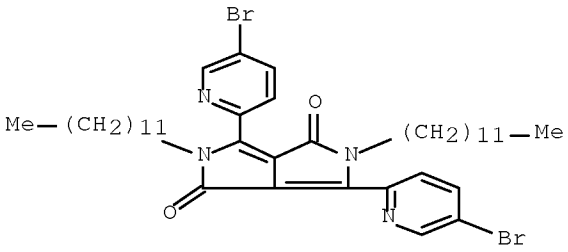
RN 777079-53-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(5-bromo-2-pyridinyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



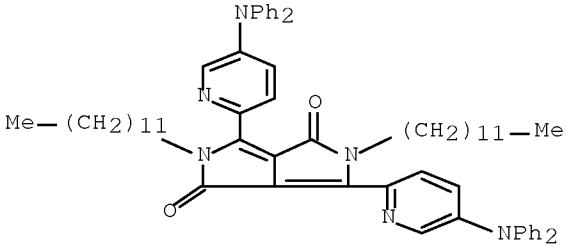
RN 777079-54-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[5-[bis(4-methylphenyl)amino]-2-pyridinyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



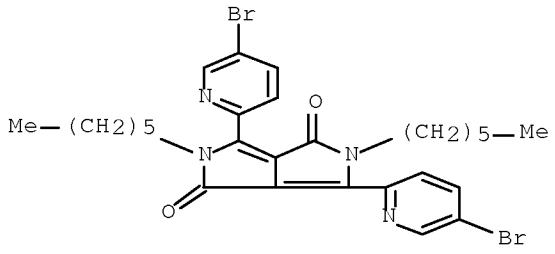
RN 777079-62-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(5-bromo-2-pyridinyl)-2,5-didodecyl-2,5-dihydro- (CA INDEX NAME)



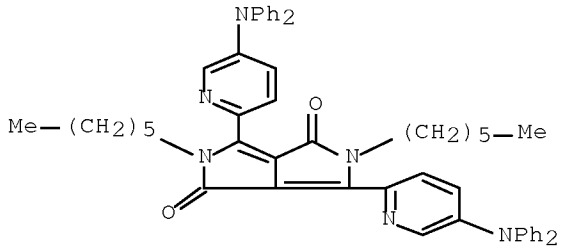
RN 777079-63-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[5-(diphenylamino)-2-pyridinyl]-2,5-didodecyl-2,5-dihydro- (CA INDEX NAME)



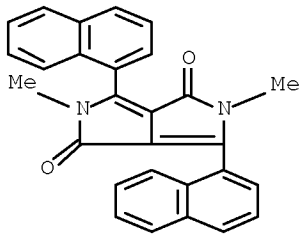
RN 777079-64-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(5-bromo-2-pyridinyl)-2,5-dihexyl-2,5-dihydro- (CA INDEX NAME)



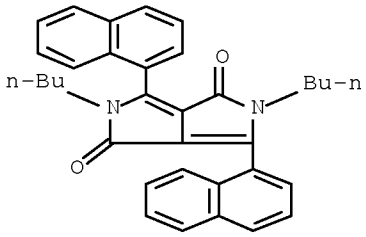
RN 777079-65-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[5-(diphenylamino)-2-pyridinyl]-2,5-dihexyl-2,5-dihydro- (CA INDEX NAME)



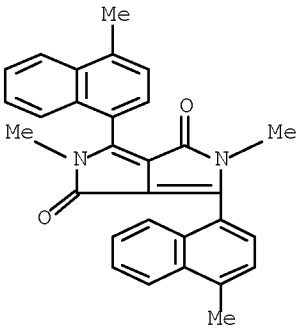
IT 474067-56-6 777079-66-0 777079-67-1
RL: TEM (Technical or engineered material use); USES (Uses)
(host chromophore; fluorescent diketopyrrolopyrroles for electroluminescent compns. based on guest chromophores having absorption spectra overlapping host fluorescent emission spectra)
RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 777079-66-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 777079-67-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

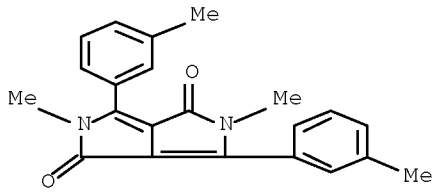
L47 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:422256 CAPLUS Full-text
DOCUMENT NUMBER: 141:372380
TITLE: Evaluation of new organic pigments as laser-active media for a solid-state dye laser
AUTHOR(S): Fukuda, Makoto; Kodama, Kunihiko; Yamamoto, Hiroshi; Mito, Keiichi
CORPORATE SOURCE: Department of Applied Photonics System Technology, Chitose Institute of Science and Technology, Hokkaido, Bibi, 066-8655, Japan
SOURCE: Dyes and Pigments (2004), 63(2), 115-125
CODEN: DYPIDX; ISSN: 0143-7208
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:372380

AB Solid-state dye lasers are small, low-cost, simple, and coherent light sources. These lasers can output a laser beam at many wavelengths by changing the organic dyes or pigments. Photodegrdn. of the laser-active medium, however, is difficult with this type of laser. Research regarding new fluorescent materials that are not easily degraded by exposure to the pump light is therefore important in developing practical applications for solid-state dye lasers. In the present study, six new organic pigments were synthesized and evaluated as the active medium of the solid-state dye laser. The issues evaluated were: (1) whether the pigments can oscillate as laser medium or not; and (2) degradation by exposure to UV light. As a result of

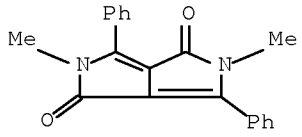
the evaluation, each of the six pigments oscillated as laser medium and green and yellow laser oscillations were obtained. The pigments were also found to have degradation characteristics similar to those of Rhodamine B.

IT 96158-98-4P 96159-17-0P 477719-73-6P
488134-84-5P 778591-37-0P 778591-38-1P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(evaluation of new diketopyrrolopyrrole organic pigments as laser-active media for a solid-state dye laser and their photobleaching characteristics)

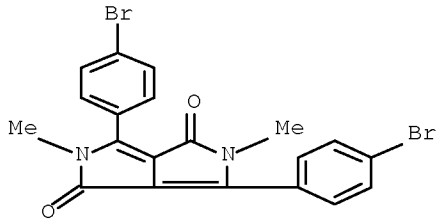
RN 96158-98-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(3-methylphenyl)- (CA INDEX NAME)



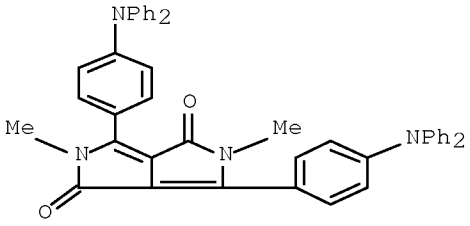
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



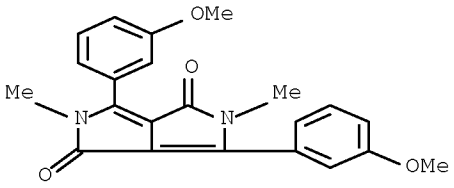
RN 477719-73-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



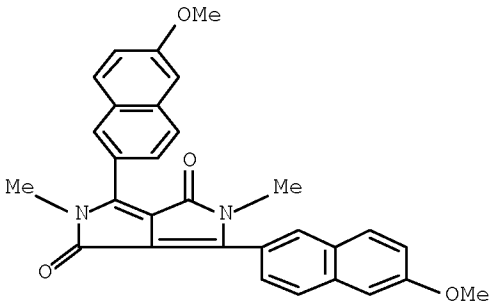
RN 488134-84-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(diphenylamino)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 778591-37-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(3-methoxyphenyl)-2,5-dimethyl- (CA INDEX NAME)



RN 778591-38-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(6-methoxy-2-naphthalenyl)-2,5-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:610553 CAPLUS Full-text
DOCUMENT NUMBER: 139:171084
TITLE: Fluorescent compositions comprising diketopyrrolopyrroles and electroluminescent devices employing the compositions
INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003064558	A1	20030807	WO 2003-EP650		20030123
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2469269	A1	20030807	CA 2003-2469269		20030123
AU 2003239272	A1	20030902	AU 2003-239272		20030123
EP 1478713	A1	20041124	EP 2003-734603		20030123
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003007402	A	20041228	BR 2003-7402		20030123
CN 1625589	A	20050608	CN 2003-803137		20030123
JP 2005526152	T	20050902	JP 2003-564157		20030123
TW 275626	B	20070311	TW 2003-92102276		20030130
MX 2004PA06662	A	20041004	MX 2004-PA6662		20040708
US 2005008892	A1	20050113	US 2004-501573		20040713
IN 2004CN01907	A	20070921	IN 2004-CN1907		20040826
PRIORITY APPLN. INFO.:			EP 2002-405067	A	20020201
			EP 2002-405796	A	20020912
			WO 2003-EP650	W	20030123

OTHER SOURCE(S): MARPAT 139:171084

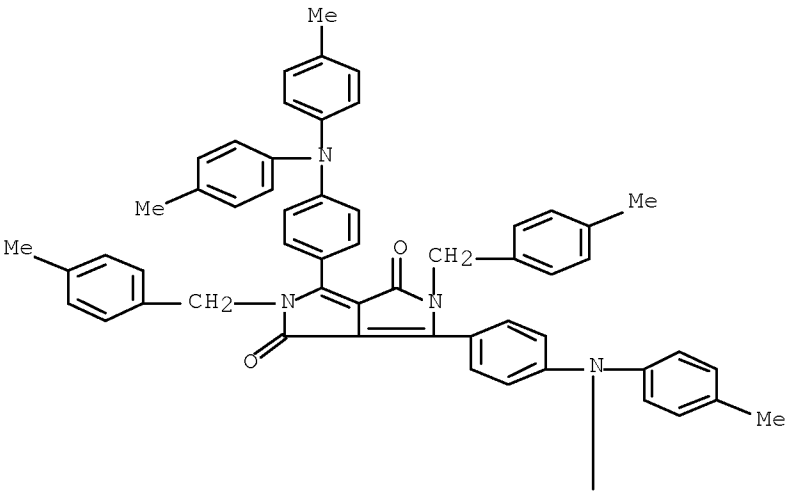
AB Fluorescent compns. are described which comprise a guest chromophore and a host chromophore, where the absorption spectrum of the guest chromophore overlaps with the fluorescence emission spectrum of the host chromophore, where the host chromophore is a diketopyrrolopyrrole having a photoluminescence emission peak at 500 to 720 nm, preferably 500 to 600 nm, most preferred 520 to 580 nm and where the guest chromophore is a diketopyrrolopyrrole having an absorption peak at 500 to 720 nm, preferably 500 to 600 nm, most preferred 520 to 580 nm. Electroluminescent devices employing the compns. according to the present invention are also discussed.

IT 575451-78-4P 575451-79-5P 575451-80-8P
575451-83-1P
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorescent compns. comprising diketopyrrolopyrroles and electroluminescent devices employing the compns.)

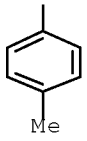
RN 575451-78-4 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]- (CA INDEX NAME)

PAGE 1-A

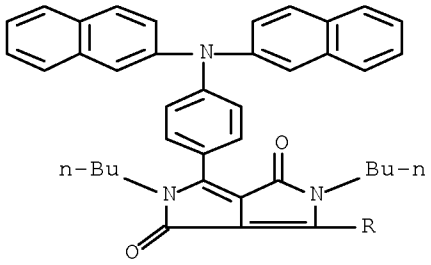


PAGE 2-A



RN 575451-79-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-3,6-bis[4-(di-2-naphthalenylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)

PAGE 1-A



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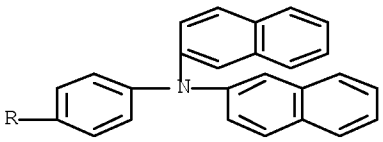
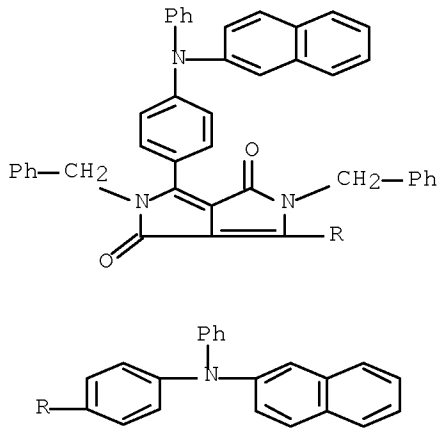


RN 575451-80-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-(2-naphthalenylphenylamino)phenyl]-2,5-bis(phenylmethyl)- (CA INDEX NAME)



RN 575451-83-1 CAPLUS
CN Benzonitrile, 4,4'-[[3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-1,4-dioxopyrrolo[3,4-c]pyrrole-2,5(1H,4H)-diyl]bis(methylene)]bis- (9CI) (CA INDEX NAME)

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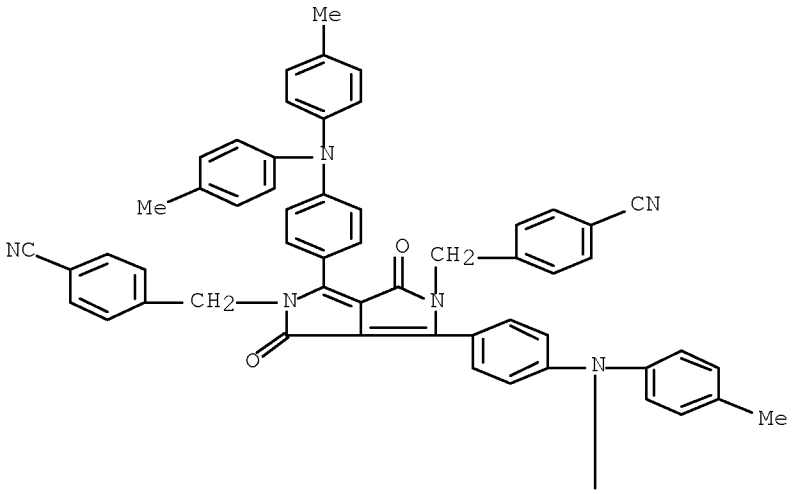

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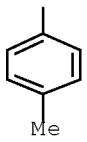
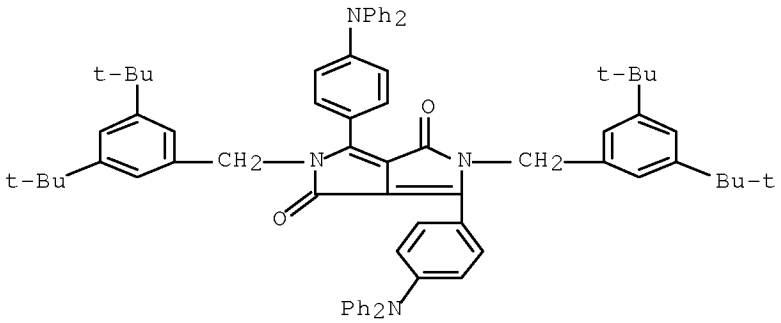
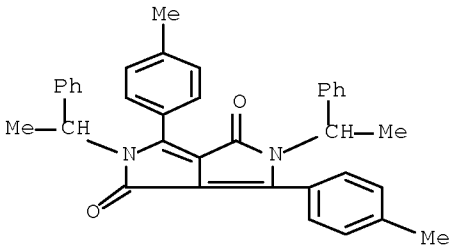


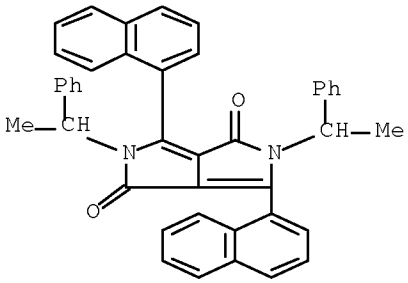
IT 331687-86-6
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(fluorescent compns. comprising diketopyrrolopyrroles and electroluminescent devices employing the compns.)
RN 331687-86-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-3,6-bis[4-(diphenylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)



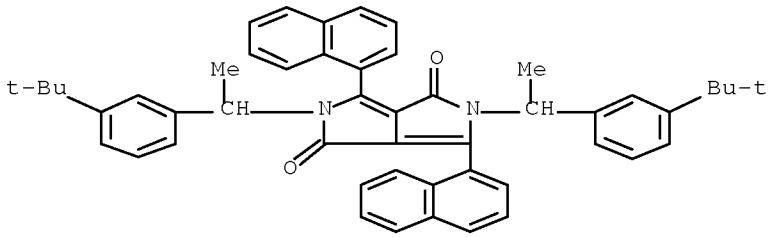
IT 575451-54-6P 575451-55-7P 575451-59-1P
575451-60-4P 575451-61-5P 575451-62-6P
575451-63-7P 575451-64-8P 575451-65-9P
575451-66-0P 575451-67-1P 575451-68-2P
575451-69-3P 575451-84-2P 575451-85-3P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorescent compns. comprising diketopyrrolopyrroles and electroluminescent devices employing the compns.)
RN 575451-54-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-2,5-bis(1-phenylethyl)- (CA INDEX NAME)



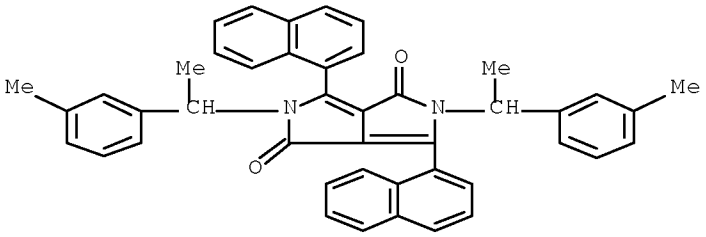
RN 575451-55-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(1-phenylethyl)- (CA INDEX NAME)



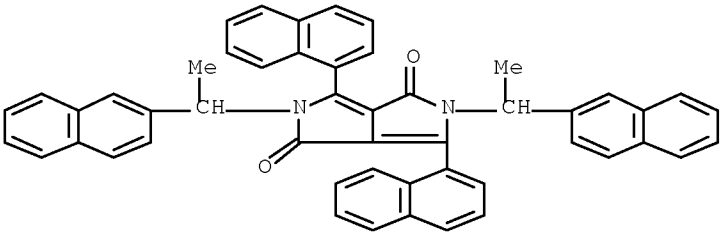
RN 575451-59-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[1-[3-(1,1-dimethylethyl)phenyl]ethyl]-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



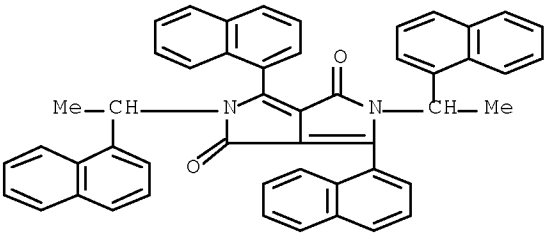
RN 575451-60-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[1-(3-methylphenyl)ethyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



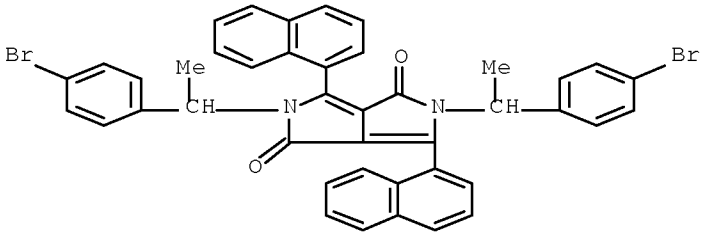
RN 575451-61-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis[1-(2-naphthalenyl)ethyl]- (CA INDEX NAME)



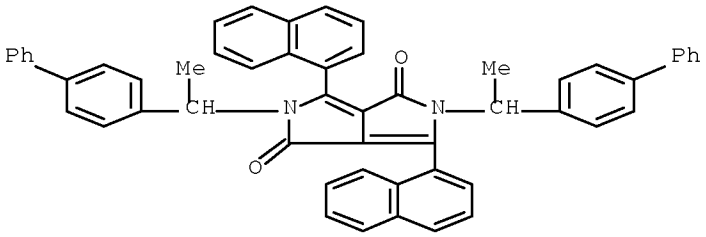
RN 575451-62-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis[1-(1-naphthalenyl)ethyl]- (CA INDEX NAME)



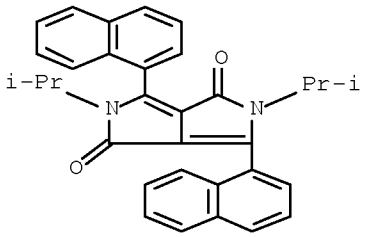
RN 575451-63-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[1-(4-bromophenyl)ethyl]-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



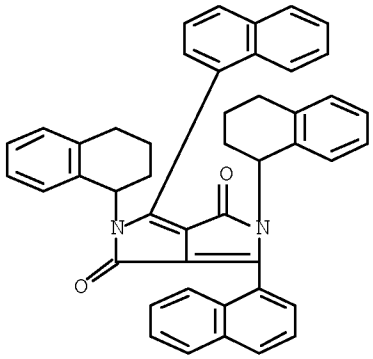
RN 575451-64-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(1-[1,1'-biphenyl]-4-ylethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



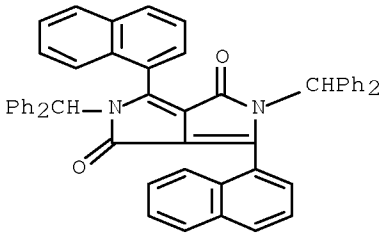
RN 575451-65-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis(1-methylethyl)-3,6-di-1-naphthalenyl- (CA INDEX NAME)



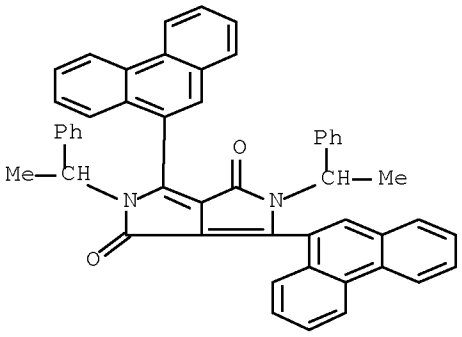
RN 575451-66-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(1,2,3,4-tetrahydro-1-naphthalenyl)- (CA INDEX NAME)



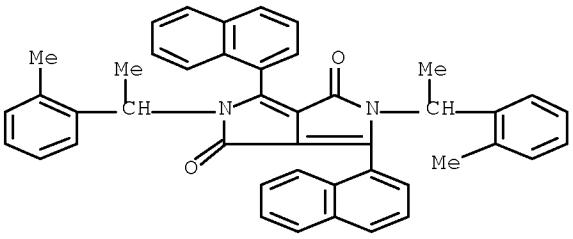
RN 575451-67-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(diphenylmethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 575451-68-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-9-phenanthrenyl-2,5-bis(1-phenylethyl)- (CA INDEX NAME)



RN 575451-69-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[1-(2-methylphenyl)ethyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 575451-84-2 CAPLUS
CN 1,2-Benzenedicarbonitrile, 4,4'-[[3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-1,4-dioxopyrrolo[3,4-c]pyrrole-2,5(1H,4H)-diyl]bis(methylene)]bis- (9CI) (CA INDEX NAME)

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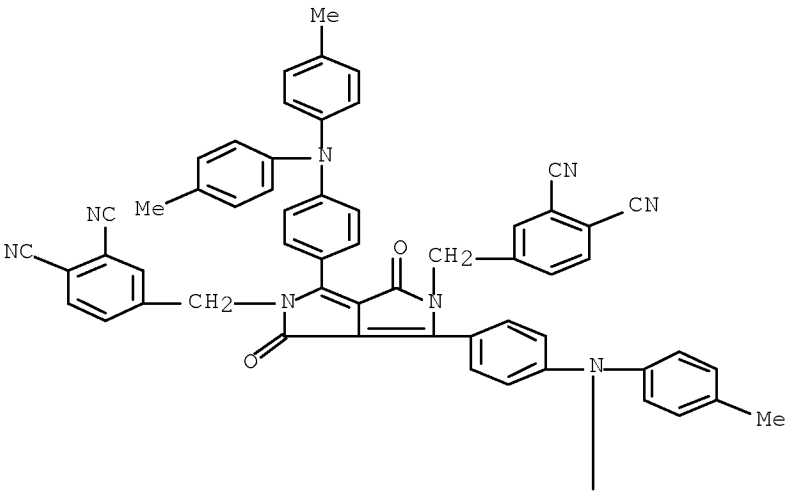

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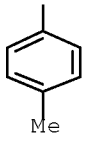
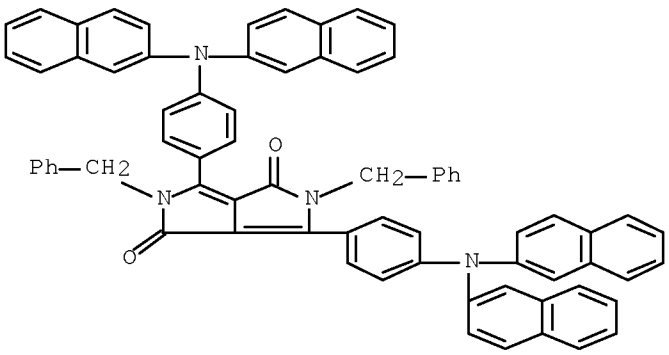


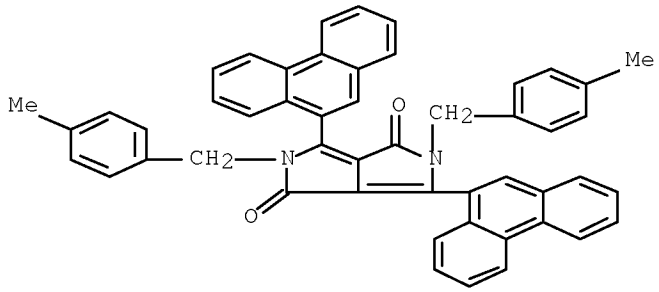
RN 575451-85-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(di-2-naphthalenylamino)phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



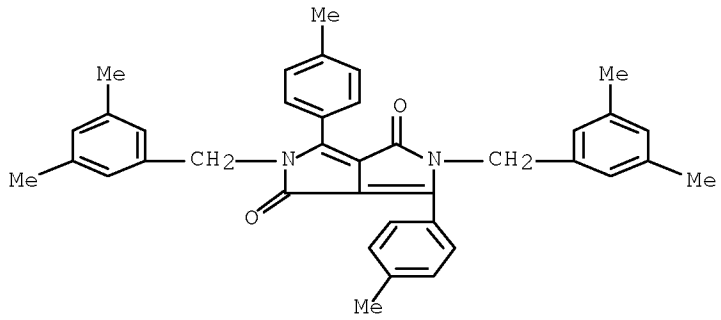
IT 361196-18-1 427375-50-6 482373-47-7
482373-48-8 482373-49-9 575451-56-8
575451-57-9 575451-58-0 575451-70-6
575451-71-7 575451-72-8 575451-73-9
575451-74-0 575451-75-1 575451-76-2
575451-77-3 575451-81-9 575451-82-0

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(fluorescent compns. comprising diketopyrrolopyrroles and electroluminescent devices employing the compns.)

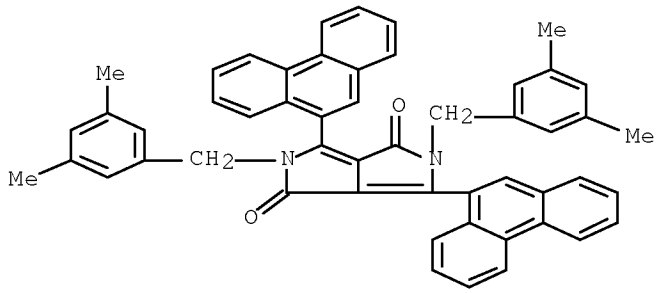
RN 361196-18-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



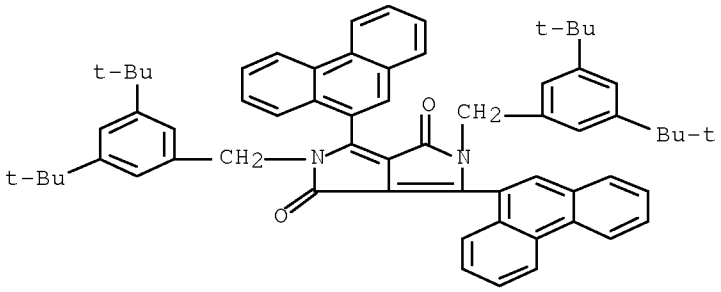
RN 427375-50-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



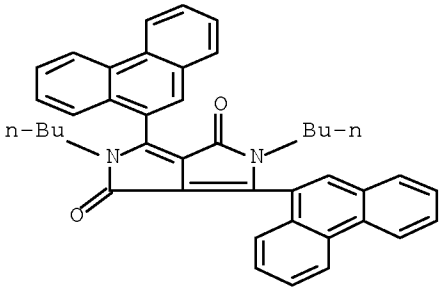
RN 482373-47-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



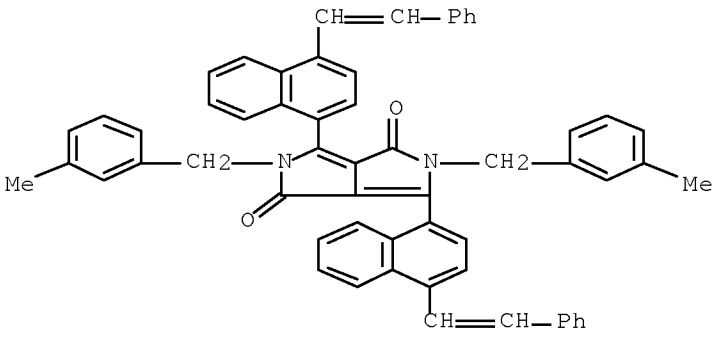
RN 482373-48-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



RN 482373-49-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

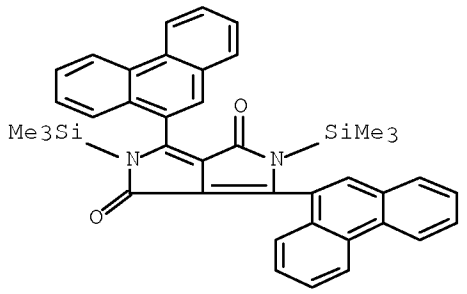


RN 575451-56-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]-3,6-bis[4-(2-phenylethenyl)-1-naphthalenyl]- (CA INDEX NAME)

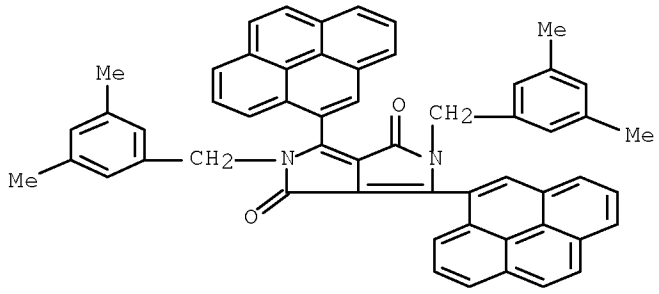


RN 575451-57-9 CAPLUS

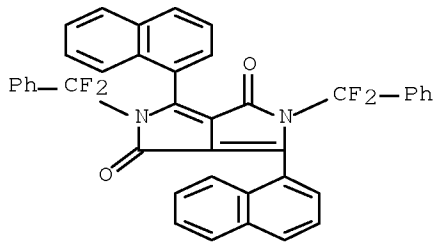
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-9-phenanthrenyl-2,5-bis(trimethylsilyl)- (CA INDEX NAME)



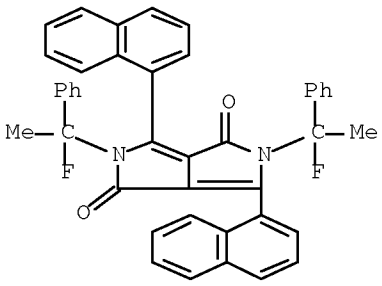
RN 575451-58-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-di-4-pyrenyl- (CA INDEX NAME)



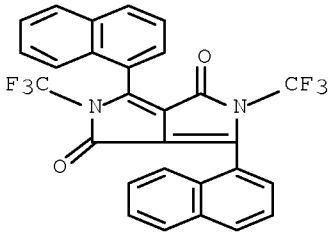
RN 575451-70-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(difluorophenylmethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



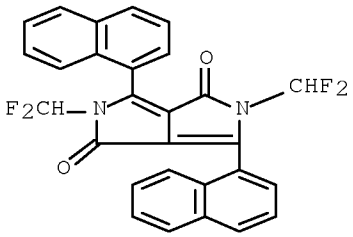
RN 575451-71-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(1-fluoro-1-phenylethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



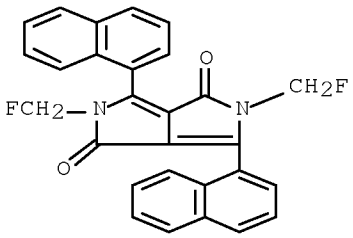
RN 575451-72-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(trifluoromethyl)- (CA INDEX NAME)



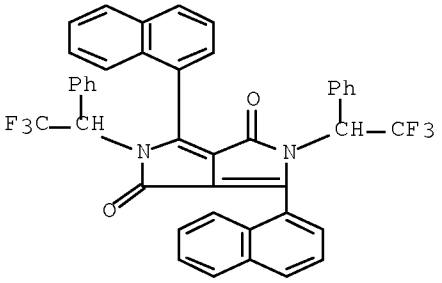
RN 575451-73-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(difluoromethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



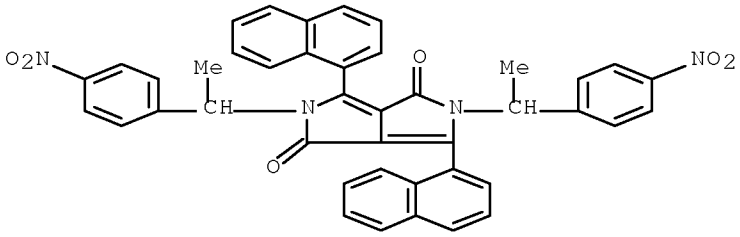
RN 575451-74-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(fluoromethyl)-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



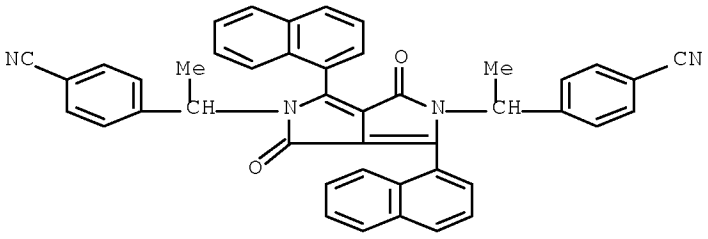
RN 575451-75-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(2,2,2-trifluoro-1-phenylethyl)- (CA INDEX NAME)



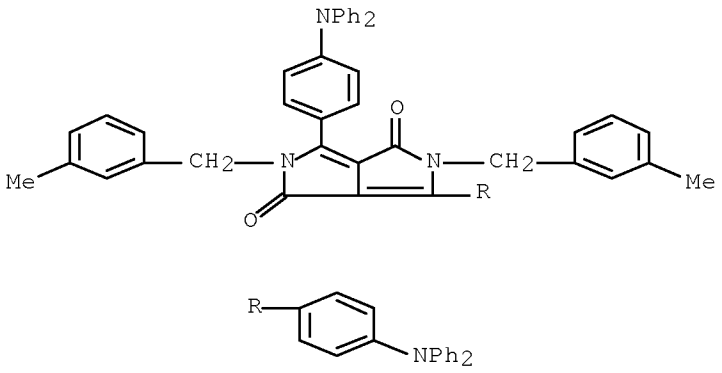
RN 575451-76-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis[1-(4-nitrophenyl)ethyl]- (CA INDEX NAME)



RN 575451-77-3 CAPLUS
CN Benzonitrile, 4,4'-[(3,6-di-1-naphthalenyl-1,4-dioxopyrrolo[3,4-c]pyrrole-2,5(1H,4H)-diyl)diethylidene]bis- (9CI) (CA INDEX NAME)

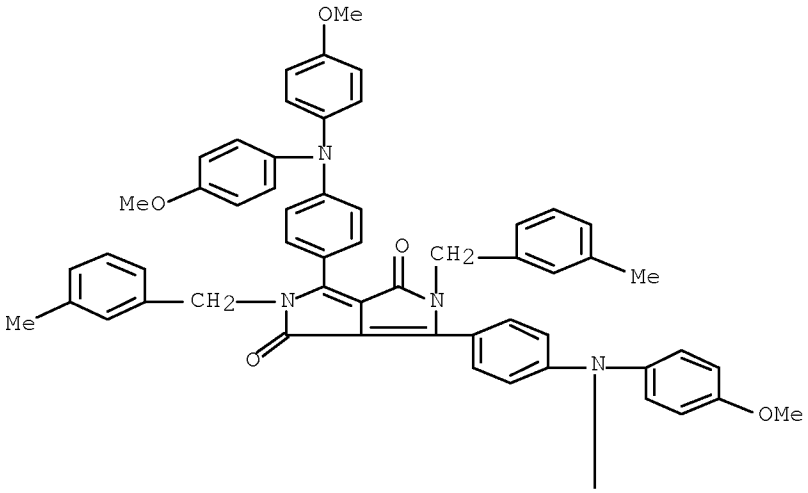


RN 575451-81-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(diphenylamino)phenyl]-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)

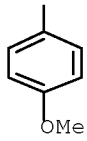


RN 575451-82-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]phenyl]-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)

PAGE 1-A

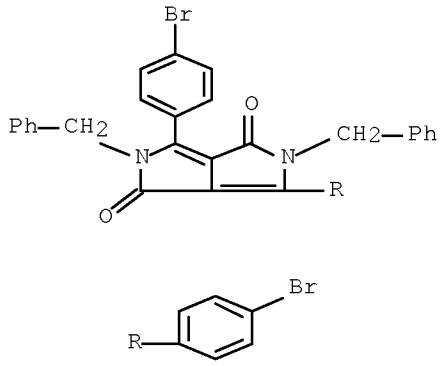


PAGE 2-A



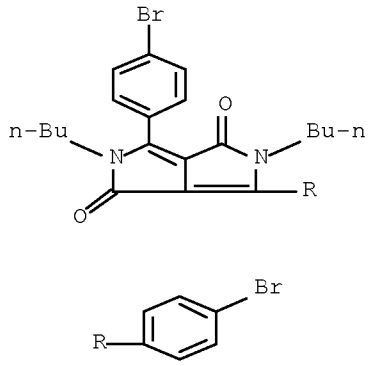
IT 532952-72-0 575451-86-4 575451-87-5
575451-88-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent compns. comprising diketopyrrolopyrroles prepared using)
RN 532952-72-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



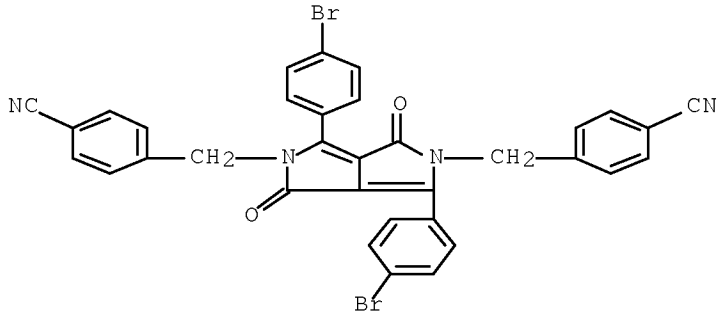
RN 575451-86-4 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dibutyl-2,5-dihydro- (CA INDEX NAME)



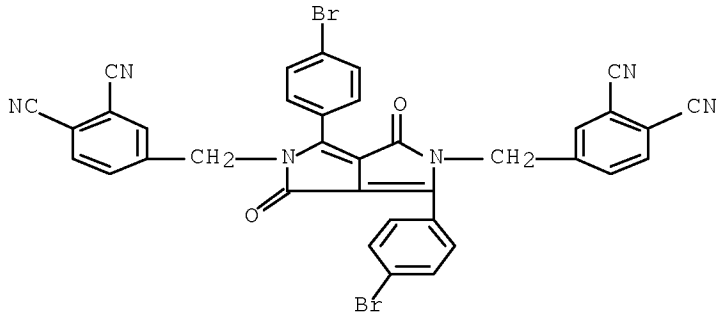
RN 575451-87-5 CAPLUS

CN Benzonitrile, 4,4'-[[3,6-bis(4-bromophenyl)-1,4-dioxopyrrolo[3,4-c]pyrrole-2,5(1H,4H)-diyl]bis(methylene)]bis- (9CI) (CA INDEX NAME)



RN 575451-88-6 CAPLUS

CN 1,2-Benzenedicarbonitrile, 4,4'-[[3,6-bis(4-bromophenyl)-1,4-dioxopyrrolo[3,4-c]pyrrole-2,5(1H,4H)-diyl]bis(methylene)]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

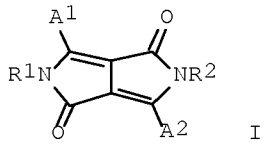
L47 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:22971 CAPLUS Full-text
DOCUMENT NUMBER: 138:74707
TITLE: Fluorescent diketopyrrolopyrroles and their use
INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa; Wallquist, Olof
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003002672	A2	20030109	WO 2002-EP6846	20020620
WO 2003002672	A3	20030320		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002319250	A1	20030303	AU 2002-319250	20020620
EP 1399514	A2	20040324	EP 2002-748803	20020620
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536177	T	20041202	JP 2003-509038	20020620
CN 1553938	A	20041208	CN 2002-813102	20020620
TW 260341	B	20060821	TW 2002-91114387	20020628
US 2004180235	A1	20040916	US 2003-481963	20031222
US 7063806	B2	20060620		
US 2006186376	A1	20060824	US 2006-409694	20060424
PRIORITY APPLN. INFO.:			EP 2001-810636 A	20010629

EP 2001-810647 A 20010702
WO 2002-EP6846 W 20020620
US 2003-481963 A1 20031222

OTHER SOURCE(S): MARPAT 138:74707

GI



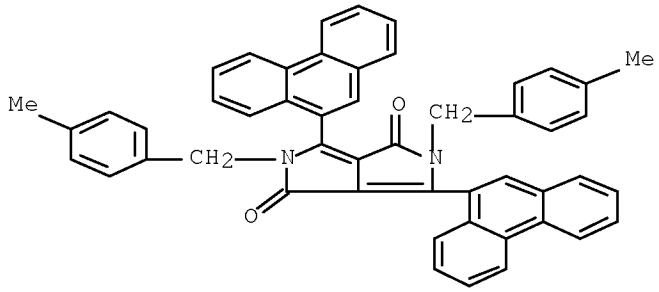
I

AB The present invention relates to fluorescent diketopyrrolopyrroles (I; A1, A2 = optionally substituted 1-naphthyl; R1, R2 = organic group) and their use in colorants and electroluminescent devices. I exhibit high lightfastness and heat stability, especially in plastics. In an example, 9-cyanophenanthrene was cyclized with di-Bu succinate to give 1,4-diketo-3,6-bis(9-phenanthryl)pyrrolo[3,4-c]pyrrole, which was then alkylated on both N atoms with 3,5-dimethylbenzyl bromide to give a red fluorescent product.

IT 361196-18-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(electroluminescent dye; production of fluorescent pyrrolopyrrolediones)

RN 361196-18-1 CAPLUS

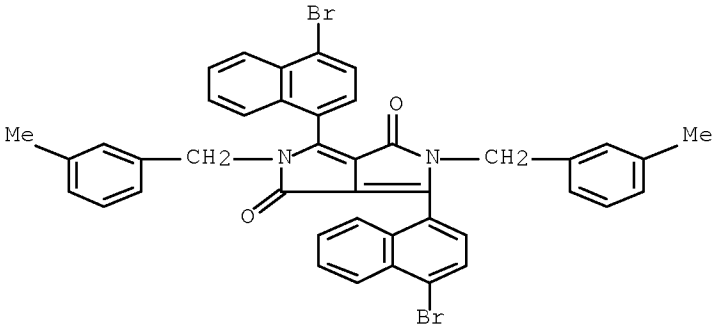
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



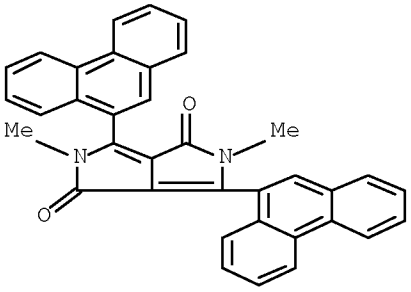
IT 482373-51-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; production of fluorescent pyrrolopyrrolediones)

RN 482373-51-3 CAPLUS

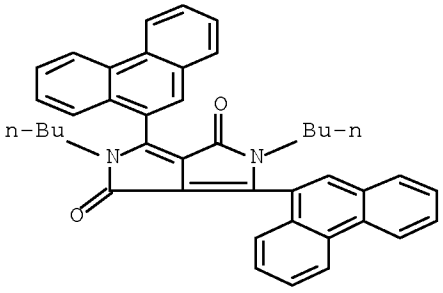
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromo-1-naphthalenyl)-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)



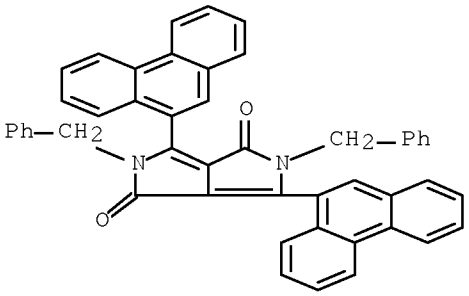
IT 474067-66-8P 482373-49-9P 482373-54-6P
482373-55-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(orange dye; production of fluorescent pyrrolopyrrolediones)
RN 474067-66-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



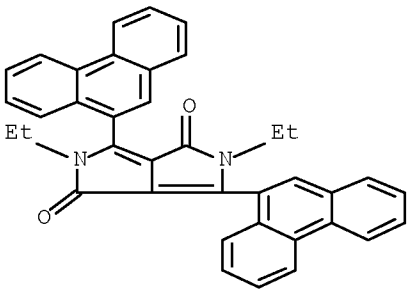
RN 482373-49-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



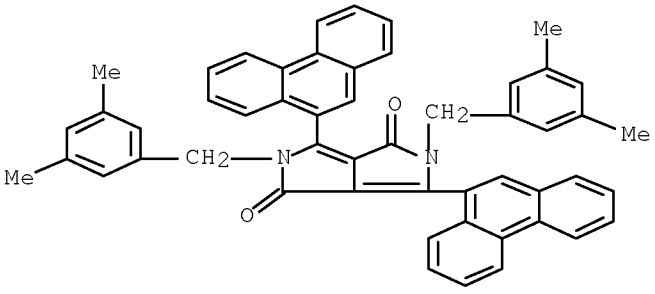
RN 482373-54-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-9-phenanthrenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)



RN 482373-55-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

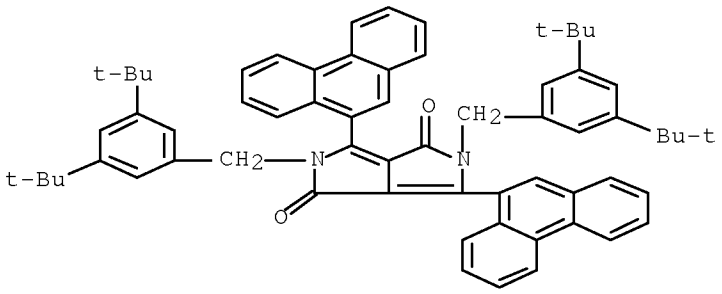


IT 482373-47-7P 482373-48-8P 482373-52-4P
482373-53-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(red dye; production of fluorescent pyrrolopyrrolediones)
RN 482373-47-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

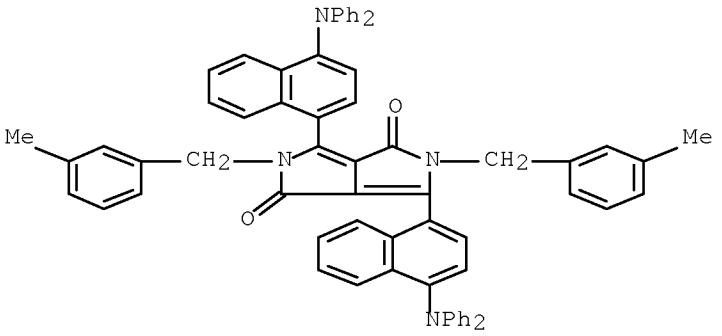


RN 482373-48-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-

dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

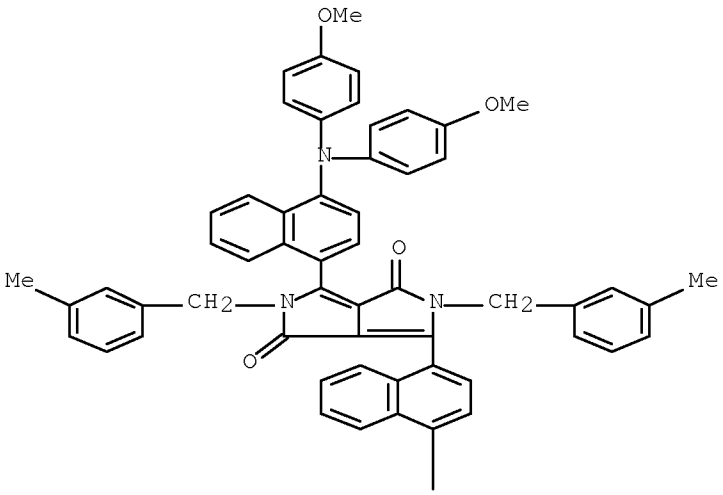


RN 482373-52-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(diphenylamino)-1-naphthalenyl]-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)

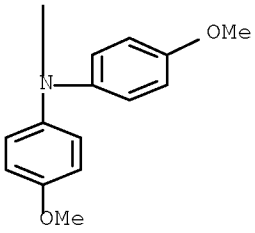


RN 482373-53-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]-1-naphthalenyl]-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

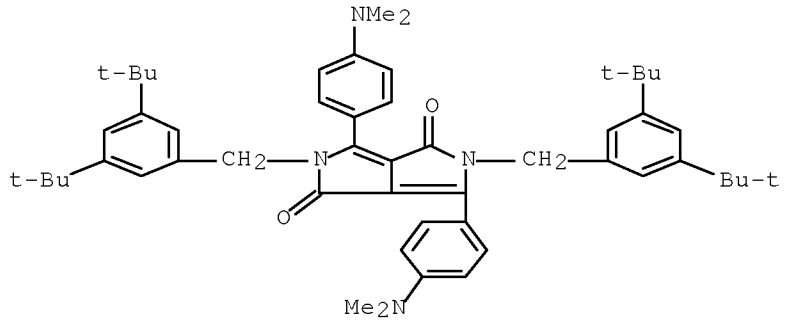


L47 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:182991 CAPLUS Full-text
DOCUMENT NUMBER: 137:5807
TITLE: Crystal structure of 2,5-bis-(3,5-di-tert-butyl-benzyl)-3,6-bis-(4-dimethylamino-phenyl)-2,5-dihydro-pyrrolo[3,4-c]pyrrole-1,4-dione
AUTHOR(S): Fujii, Isao; Ohtani, Jyunji; Kodama, Kunihiko; Yamamoto, Hiroshi; Hirayama, Noriaki
CORPORATE SOURCE: Department of Biological Science and Technology, Tokai University, Shizuoka, 410-0321, Japan
SOURCE: Analytical Sciences (2002), 18(2), 223-224
CODEN: ANSCEN; ISSN: 0910-6340
PUBLISHER: Japan Society for Analytical Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The crystal structure of the title compound (I) has been determined by X-ray crystal structure anal. An intramol. hydrogen bond (C- H···O) was found in I, but no intermol. hydrogen bonding is present, the mols. are connected only by van der Waals interactions. The mols. in the crystal are arranged in a herringbone fashion.
IT 432552-48-2
RL: PRP (Properties)

(crystal structure; crystal structure of 2,5-bis-(3,5-di-tert-butyl-benzyl)-3,6-bis-(4-dimethylamino-phenyl)-2,5-dihydro-pyrrolo[3,4-c]pyrrole-1,4-dione)

RN 432552-48-2 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-3,6-bis[4-(dimethylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:182990 CAPLUS Full-text

DOCUMENT NUMBER: 136:385760

TITLE: Crystal structure of 2,5-bis-(3,5-dimethylbenzyl)-3,6-dinaphthalen-2-yl-2,5-dihydro-pyrrolo[3,4-c]pyrrole-1,4-dione

AUTHOR(S): Fujii, Isao; Ohtani, Jyunji; Kodama, Kunihiko; Yamamoto, Hiroshi; Hirayama, Noriaki

CORPORATE SOURCE: Department of Biological Science and Technology, Tokai University, Shizuoka, 410-0321, Japan

SOURCE: Analytical Sciences (2002), 18(2), 221-222
CODEN: ANSCEN; ISSN: 0910-6340

PUBLISHER: Japan Society for Analytical Chemistry

DOCUMENT TYPE: Journal

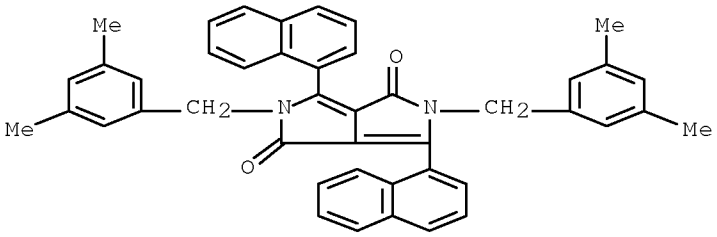
LANGUAGE: English

AB The crystal structure of the title compound (I) has been determined by X-ray crystal structure anal. For I a C-H···O intramol. hydrogen bond was found. The mols. in the crystal are arranged in a herringbone fashion. There are no intermol. hydrogen bonds present, the mols. are connected by van der Waals interactions.

IT 368868-28-4
RL: PRP (Properties)
(crystal structure; of 2,5-bis-(3,5-dimethylbenzyl)-3,6-dinaphthalen-2-yl-2,5-dihydro-pyrrolo[3,4-c]pyrrole-1,4-dione)

RN 368868-28-4 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



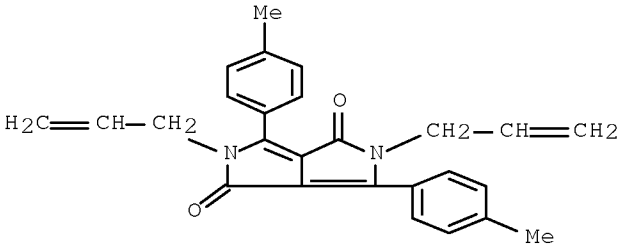
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:173884 CAPLUS Full-text
DOCUMENT NUMBER: 137:85473
TITLE: Solid-state laser with newly synthesized pigment
AUTHOR(S): Fukuda, Makoto; Kodama, Kunihiko; Yamamoto, Hiroshi; Mito, Keiichi
CORPORATE SOURCE: Department of Applied Photonics System Technology, Chitose Institute of Science and Technology, Chitose, Hokkaido, 066-8655, Japan
SOURCE: Dyes and Pigments (2002), 53(1), 67-72
CODEN: DYPIDX; ISSN: 0143-7208
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A yellow laser oscillation was obtained using a newly synthesized pigment. The compound used in this study is a derivative of 3,6-diphenylpyrrolo(3,4-c)pyrrole-1,4-dione. In the compound used, the Ph groups are substituted by p-methylphenyl groups and the H atoms attached to the nitrogens by allyl groups. The authors prepared a 10-μm-thick thin polymethyl methacrylate (PMMA) film, into which the authors incorporated the pigment, around a 3-mm-diameter quartz rod. The authors adopted the thin-film ring laser system to examine the laser action with the pigment. The authors pumped the pigment-doped PMMA thin film with the 3rd-harmonic-generation (THG) produced by a pulsed Nd:YAG laser. The center wavelength of the laser oscillation was 575 nm. The threshold pump energy d. was .apprx.0.55 mJ/cm2.

IT 440371-56-2P
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(solid-state laser with newly synthesized pigment)

RN 440371-56-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-2,5-di-2-propenyl- (9CI) (CA INDEX NAME)



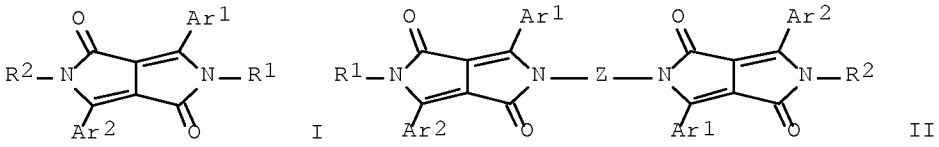
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:228314 CAPLUS Full-text
DOCUMENT NUMBER: 134:273302
TITLE: Electroluminescent devices comprising diketopyrrolopyrroles
INVENTOR(S): Otani, Junji; Yamamoto, Hiroshi; Dan, Norihisa; Iqbal, Abul; Moretti, Robert
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 44 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1087006	A1	20010328	EP 2000-810848	20000919
EP 1087006	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TW 503255	B	20020921	TW 2000-89117516	20000829
US 7060843	B1	20060613	US 2000-657738	20000908
EP 1329493	A2	20030723	EP 2003-9036	20000919
EP 1329493	A3	20070523		
R: CH, DE, FR, GB, IT, LI				
JP 2001139940	A	20010522	JP 2000-288030	20000922
JP 3854792	B2	20061206		
US 2004009368	A1	20040115	US 2003-425201	20030429
US 7001677	B2	20060221		
JP 2006319347	A	20061124	JP 2006-158476	20060607

PRIORITY APPLN. INFO.:
EP 1999-810868 A 19990927
US 2000-657738 A3 20000908
EP 2000-810848 A3 20000919
JP 2000-288030 A3 20000922

OTHER SOURCE(S): MARPAT 134:273302
GI

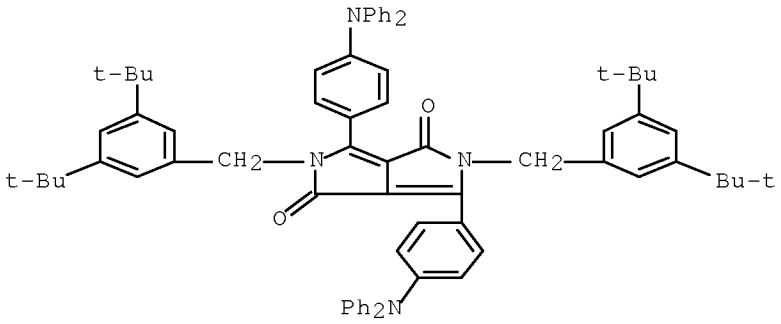


I II

AB Electroluminescent devices are described which employ fluorescent diketopyrrolopyrrole derivs. described by the general formulas I and II(Ar1, Ar2 = independently selected (un)substituted cyclic groups; R1, R2 = independently selected (un)substituted alkyl or allyl groups; and Z = a diradical selected from a single bond, C2-6 alkylene, which can be substituted one to three times with C1-4 alkyl, C1-4 alkoxy, or Ph, phenylene, or naphthylene) in the light-emitting layers. The fluorescent

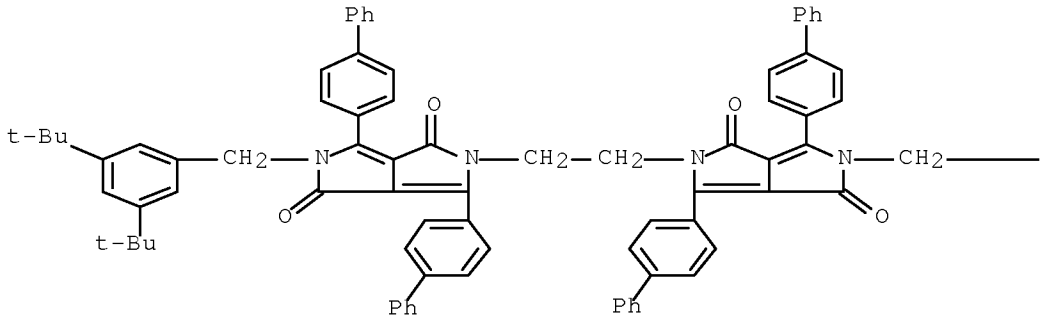
diketopyrrolopyrrole derivs. are also claimed. Methods for preparing the derivs. are described which entail treating a precursor diketopyrrolopyrrole derivative are also described. A method of coloring high mol. weight organic materials (e.g., a polyamide, a polystyrene, preferably high impact polystyrene, polymethylmethacrylate or an ABS copolymer) by incorporating the derivs., as well as colored compns. incorporating the derivs. along with high mol. weight organic materials are also described.

IT 331687-86-6
RL: DEV (Device component use); USES (Uses)
(electroluminescent devices comprising diketopyrrolopyrrole derivs. and the derivs. and their preparation)
RN 331687-86-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-3,6-bis[4-(diphenylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)



IT 331687-83-3P 331687-85-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(electroluminescent devices comprising diketopyrrolopyrrole derivs. and the derivs. and their preparation)
RN 331687-83-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,2'-(1,2-ethanediyl)bis[3,6-bis([1,1'-biphenyl]-4-yl)-5-[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A



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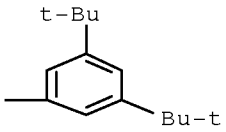
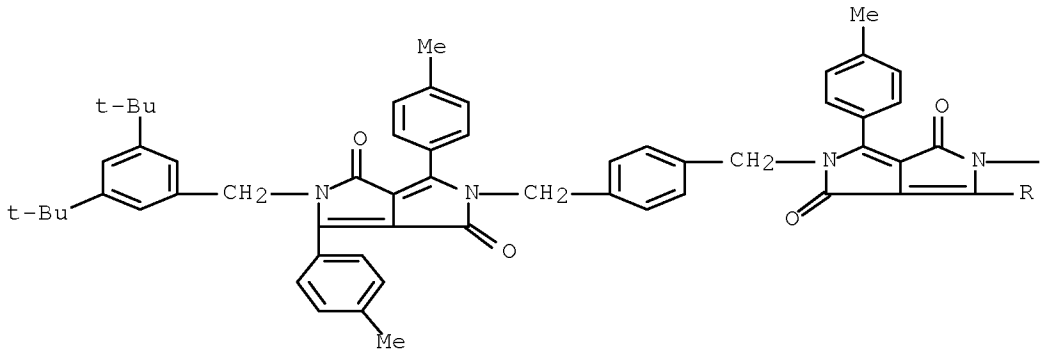
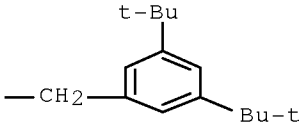


RN 331687-85-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,2'-[1,4-phenylenebis(methylene)]bis[5-[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

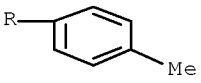
PAGE 1-A



PAGE 1-B

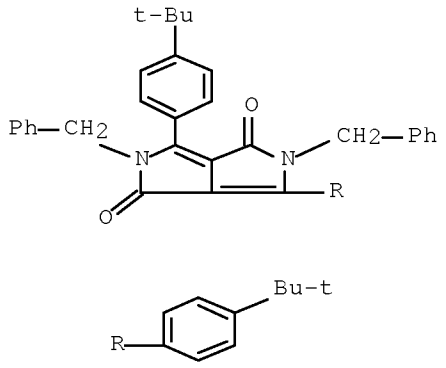


PAGE 2-A

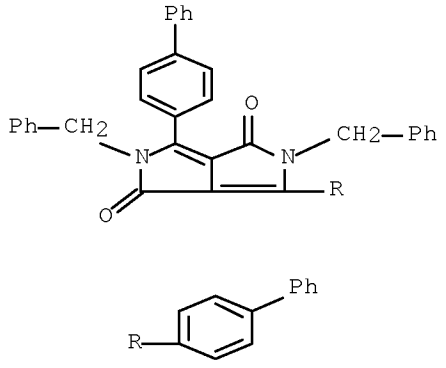


IT 331687-77-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(electroluminescent devices comprising diketopyrrolopyrrole derivs. and

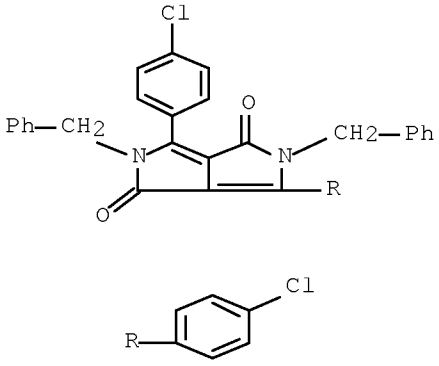
the derivs. and their preparation and other uses)
RN 331687-77-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



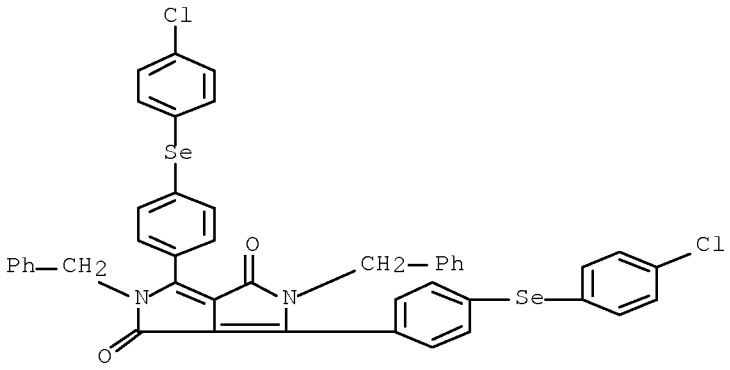
IT 331678-08-1P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(electroluminescent devices comprising diketopyrrolopyrrole derivs. and the derivs. and their preparation and other uses)
RN 331678-08-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



IT 331678-10-5P 331678-14-9P
RL: DEV (Device component use); IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(electroluminescent devices comprising diketopyrrolopyrrole derivs. and the derivs. and their preparation and other uses)
RN 331678-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



RN 331678-14-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[(4-chlorophenyl)seleno]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



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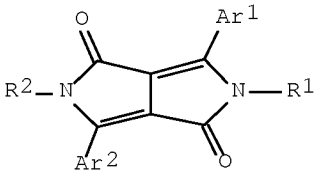
L47 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:228313 CAPLUS Full-text
DOCUMENT NUMBER: 134:273272
TITLE: Fluorescent diketopyrrolopyrroles
INVENTOR(S): Moretti, Robert; Hao, Zhimin; Yamamoto, Hiroshi
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1087005	A1	20010328	EP 2000-810847	20000919
EP 1087005	B1	20040225		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

TW 261064	B	20060901	TW 2000-89118230		20000906
US 6603020	B1	20030805	US 2000-735080		20000907
JP 2001097975	A	20010410	JP 2000-288313		20000922
KR 753348	B1	20070830	KR 2000-56659		20000927
US 2003187106	A1	20031002	US 2003-354602		20030130
PRIORITY APPLN. INFO.:			EP 1999-810867	A	19990927
			US 2000-735080	A3	20000907

OTHER SOURCE(S): MARPAT 134:273272
GI



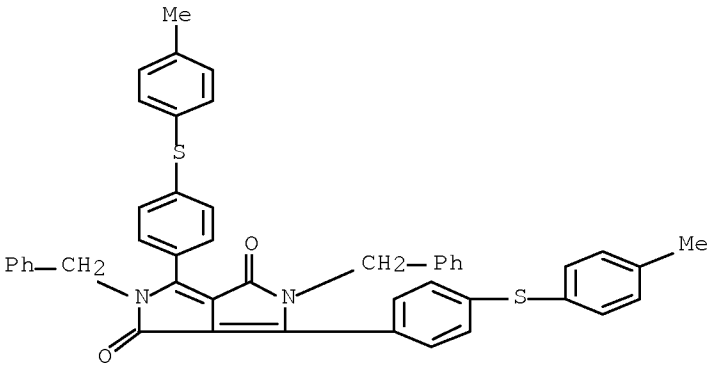
I

AB Fluorescent diketopyrrolopyrrole derivs. are described by the general formula I (Ar1, Ar2 = independently selected (un)substituted cyclic groups; R1, R2 = independently selected (un)substituted alkyl or allyl groups). Methods for preparing the derivs. are described which entail treating a precursor diketopyrrolopyrrole derivative are also described. A method of coloring high mol. weight organic materials (e.g., a polyamide, a polystyrene, preferably high impact polystyrene, polymethylmethacrylate or an ABS copolymer) by incorporating the derivs., as well as colored compns. incorporating the derivs. along with high mol. weight organic materials are also described. The use of the diketopyrrolopyrrole derivs. for the preparation of inks, colorants, pigmented plastics for coatings, non-impact-printing material, color filters, cosmetics, or for the preparation of polymeric ink particles, toners, dye lasers, and electroluminescent devices is also described.

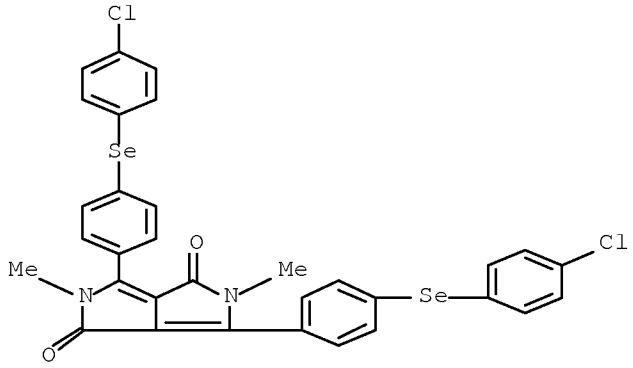
IT 331678-11-6P 331678-13-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)

RN 331678-11-6 CAPLUS

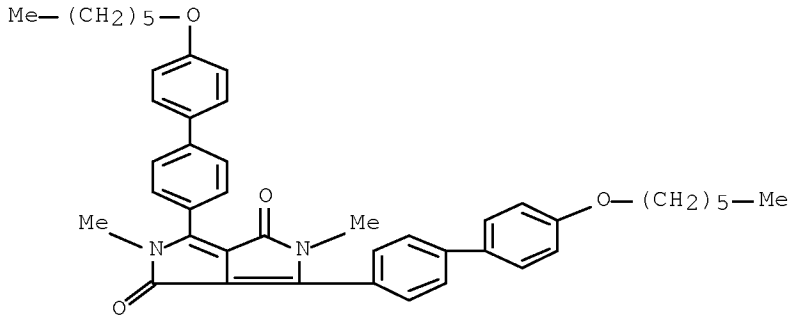
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-[(4-methylphenyl)thio]phenyl]-2,5-bis(phenylmethyl)- (CA INDEX NAME)



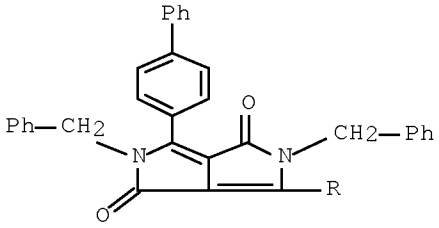
RN 331678-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-[(4-chlorophenyl)seleno]phenyl]-2,5-dihydro-2,5-dimethyl- (9CI) (CA INDEX NAME)

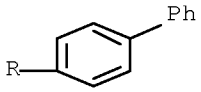


IT 205104-13-8P 331678-08-1P 331678-18-3P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)
RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

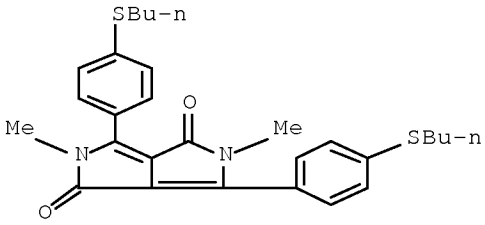


RN 331678-08-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

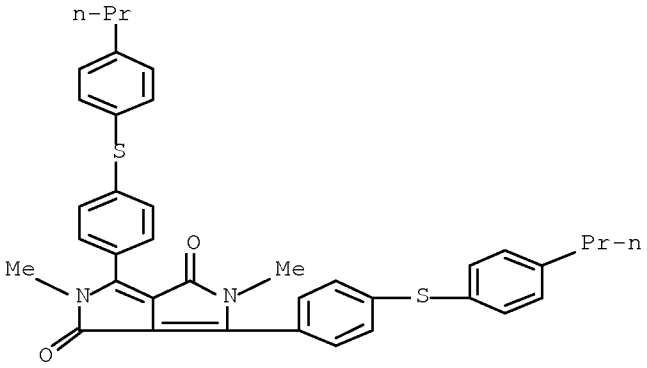




RN 331678-18-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(butylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



IT 331678-16-1P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)
RN 331678-16-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-[(4-propylphenyl)thio]phenyl]- (CA INDEX NAME)

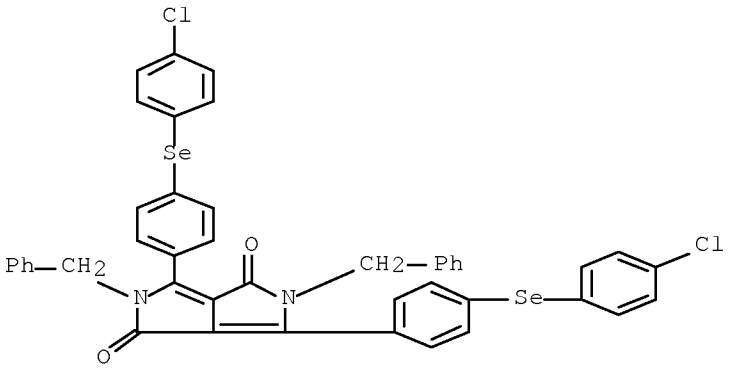


IT 331678-14-9P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)

RN 331678-14-9 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[(4-chlorophenyl)seleno]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



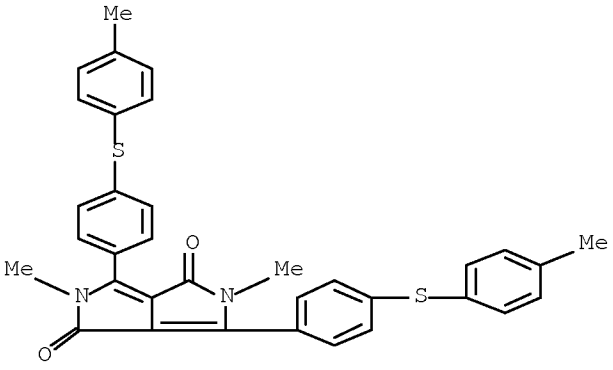
IT 331678-12-7P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)

RN 331678-12-7 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-[(4-methylphenyl)thio]phenyl]- (CA INDEX NAME)



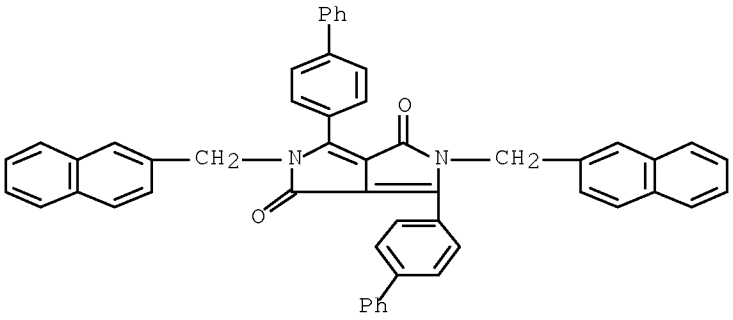
IT 331678-09-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

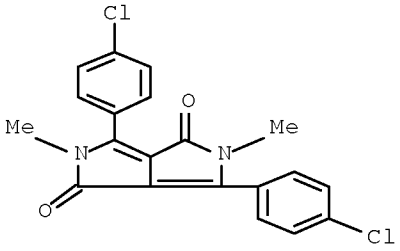
(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)

RN 331678-09-2 CAPLUS

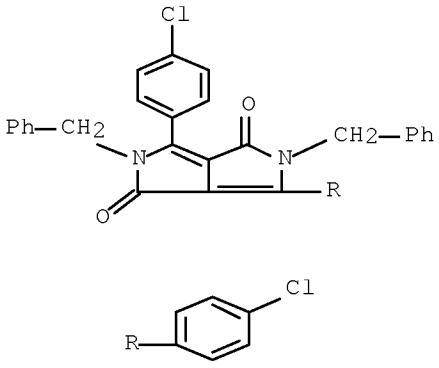
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(2-naphthalenylmethyl)- (CA INDEX NAME)



IT 96159-14-7P 331678-10-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent diketopyrrolopyrrole derivs. and their preparation and use)
RN 96159-14-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 331678-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CLAIMS 1-6,11-13,15-21

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FILE 'REGISTRY' ENTERED AT 13:06:57 ON 05 FEB 2008
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DICTIONARY FILE UPDATES:   4 FEB 2008  HIGHEST RN 1001463-85-9

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on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html


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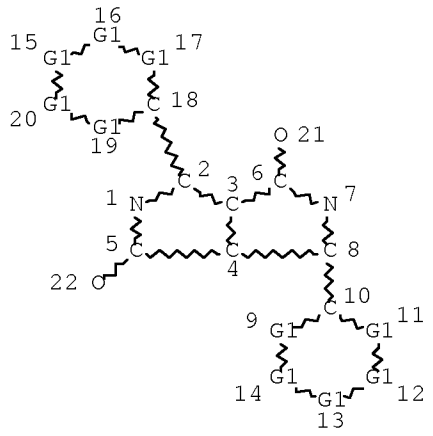


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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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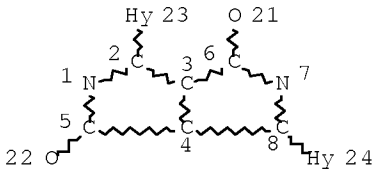

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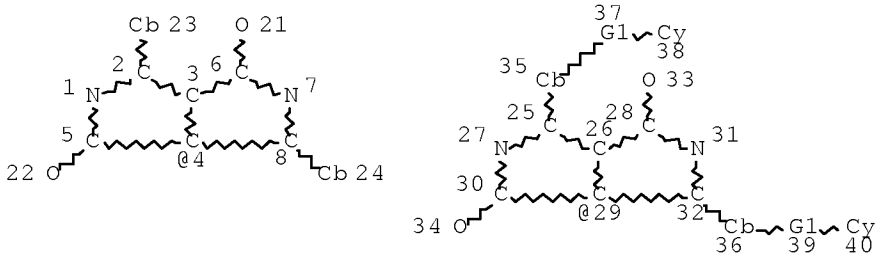

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CONNECT IS E1 RC AT 34
CONNECT IS E2 RC AT 41
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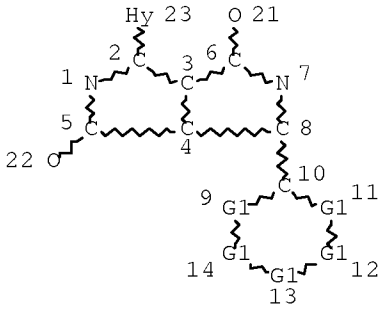

VAR G1=N/C
NODE ATTRIBUTES:
CONNECT IS M1 C AT 1
CONNECT IS M1 C AT 7
CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 23

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NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
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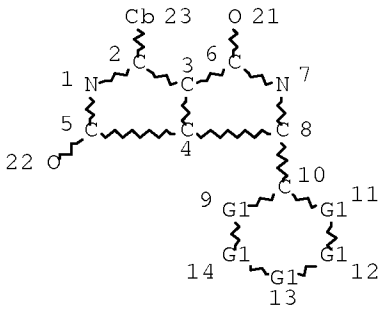

VAR G1=N/C
NODE ATTRIBUTES:

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CONNECT IS M1 C AT 7
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CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 23
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
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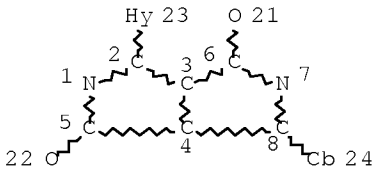

NODE ATTRIBUTES:
CONNECT IS M1 C AT 1
CONNECT IS M1 C AT 7
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GGCAT IS PCY AT 24
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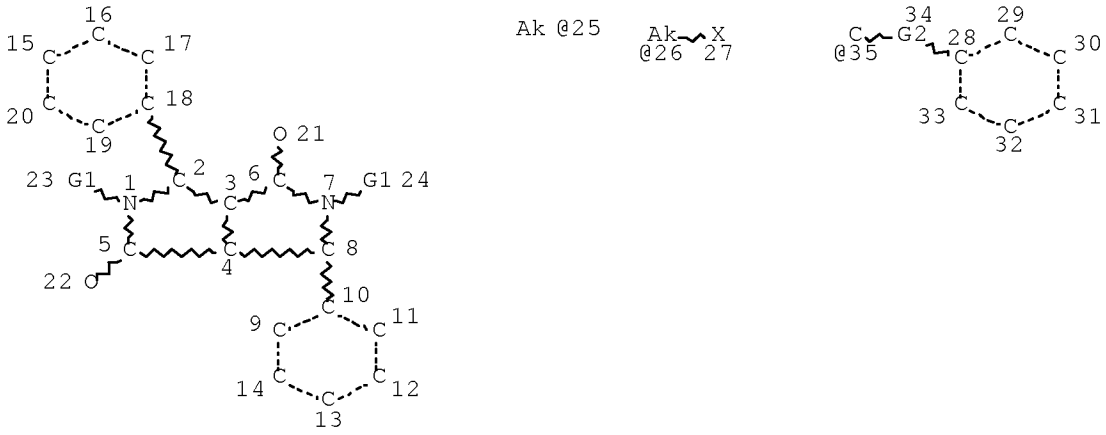
ECOUNT IS M1 N AT 23

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L22 STR



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REP G2=(0-4) CH2
NODE ATTRIBUTES:

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC  15  10
NUMBER OF NODES IS  35

STEREO ATTRIBUTES: NONE
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                L21 OR L22)
L37         373 SEA FILE=REGISTRY SUB=L25 SSS FUL L22

100.0% PROCESSED     468 ITERATIONS                          373 ANSWERS
SEARCH TIME: 00.00.01



L1              STR
L2          693 SEA FILE=REGISTRY SSS FUL L1
L4              STR
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L19             STR
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L21             STR
L22             STR
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                L21 OR L22)
L37         373 SEA FILE=REGISTRY SUB=L25 SSS FUL L22
L38         108 SEA FILE=REGISTRY ABB=ON  L25 NOT L37


=> fil capl; d que nos l39
FILE 'CAPLUS' ENTERED AT 13:07:07 ON 05 FEB 2008
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FILE LAST UPDATED: 4 Feb 2008  (20080204/ED)

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http://www.cas.org/infopolicy.html
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE
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L1              STR
L2          693 SEA FILE=REGISTRY SSS FUL L1
L4              STR
L12             STR
L19             STR
L20             STR
L21             STR
L22             STR
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L37         373 SEA FILE=REGISTRY SUB=L25 SSS FUL L22
L38         108 SEA FILE=REGISTRY ABB=ON  L25 NOT L37
L39          33 SEA FILE=CAPLUS ABB=ON  L38


=> s l39 not l47
L61          24 L39 NOT L47    L47=INVENTOR SEARCH ANSWER SET

=> d que nos l33
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L2          693 SEA FILE=REGISTRY SSS FUL L1
L4              STR
L12             STR
L19             STR
L20             STR
L21             STR
L22             STR
L25         481 SEA FILE=REGISTRY SUB=L2 SSS FUL (L4 OR L12 OR L19 OR L20 OR
                L21 OR L22)
L32         158 SEA FILE=CAPLUS ABB=ON  L25
L33         107 SEA FILE=CAPLUS ABB=ON  L32 AND (PY<2003 OR AY<2003 OR
                PRY<2003)


=> s l33 and l61
L62          18 L33 AND L61    L33=DATE LIMIT

=> d ibib abs hitstr 1-18

L62  ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:587037  CAPLUS  Full-text
DOCUMENT NUMBER:          141:131068
TITLE:                    Electroluminescent compositions, and their organic
                          electroluminescent devices emitting light from green
                          to yellow
INVENTOR(S):              Onikubo, Shunichi; Yauchi, Hiroyuki; Yagi, Tamao;
                          Kaneko, Tetsuya; Tanaka, Hiroaki; Takada, Yasuyuki
PATENT ASSIGNEE(S):       Toyo Ink Mfg. Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 67 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 2004206893         A     20040722    JP 2002-371262          20021224 <--
     JP 3969300            B2    20070905
PRIORITY APPLN. INFO.:                       JP 2002-371262          20021224 <--
```

AB The compns. contain (A) compds. having peaks at 475-600 nm in fluorescent spectra of their solid films and (B) compds. showing the sum of areas (intensities) ≤20% at ≤500 nm and ≥600 nm, or at ≥500 nm based on total areas (intensities) at 400-800 nm in fluorescent spectrum of solid films comprising A and 5% B. Organic electroluminescent devices having emitter layers containing the compns. containing 1:0.1 perylene derivative and diketopyrrolopyrrole derivative showed high luminescence intensity and good durability in repeated use.

IT 307303-24-8 536761-56-5 724789-18-8
724789-23-5 724789-25-7 724789-28-0
724789-30-4 724789-31-5
RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(dopant; electroluminescent compns. for organic electroluminescent devices showing high luminescence intensity and durability in repeated use)

RN 307303-24-8 CAPLUS
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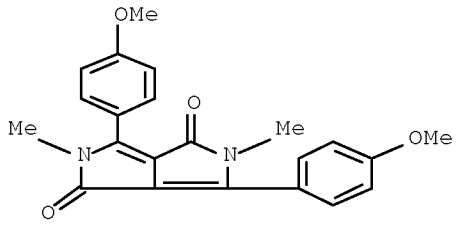
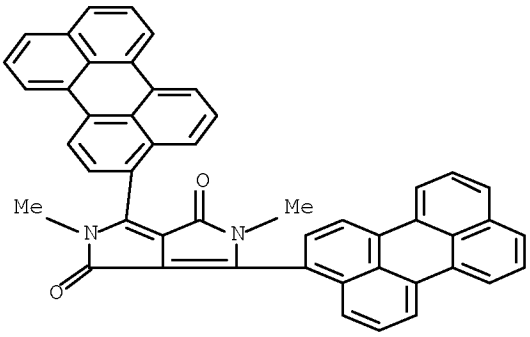
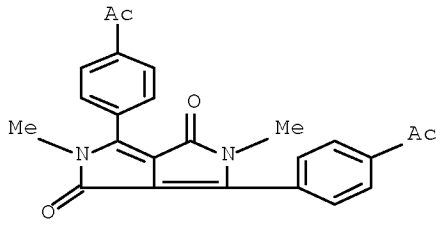


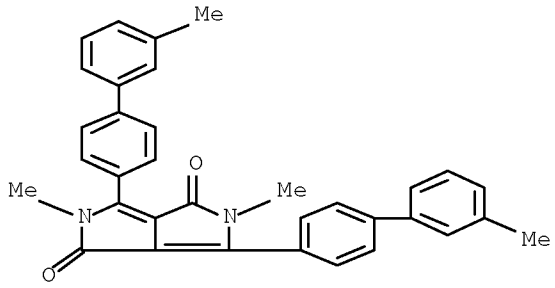
RN 536761-56-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-3-perylenyl- (CA INDEX NAME)



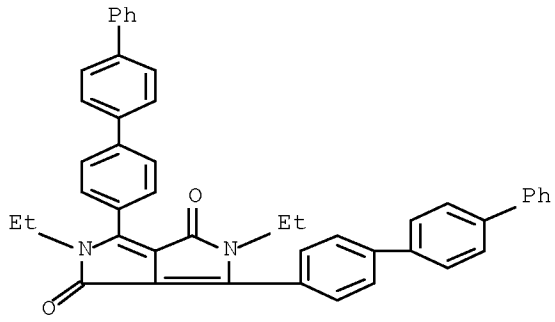
RN 724789-18-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-acetylphenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



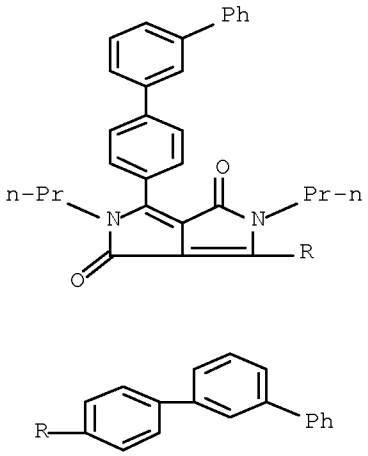
RN 724789-23-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(3'-methyl[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



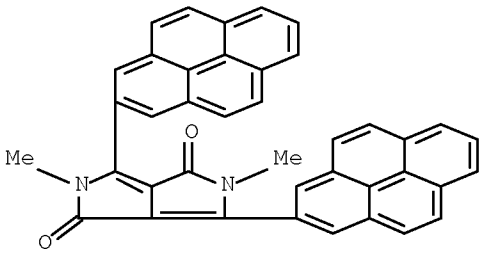
RN 724789-25-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis([1,1':4',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)



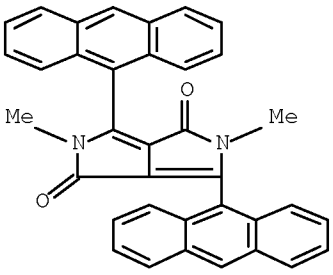
RN 724789-28-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dipropyl-3,6-bis([1,1':3',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)



RN 724789-30-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-2-pyrenyl- (CA INDEX NAME)



RN 724789-31-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-di-9-anthracenyl-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

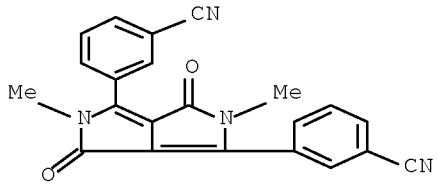


IT 96158-94-0 96159-17-0 107680-84-2
107680-85-3 205104-13-8 474067-56-6
477719-72-5 536761-55-4 724789-02-0
724789-03-1 724789-05-3
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(host; electroluminescent compns. for organic electroluminescent devices showing high luminescence intensity and durability in repeated use)

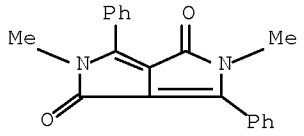
RN 96158-94-0 CAPLUS

CN Benzonitrile, 3,3'-(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



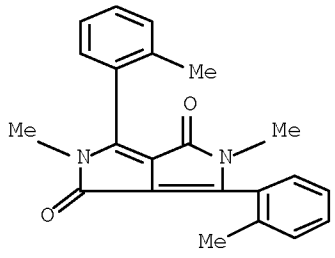
RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



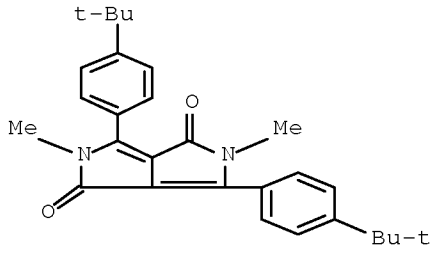
RN 107680-84-2 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(2-methylphenyl)- (CA INDEX NAME)

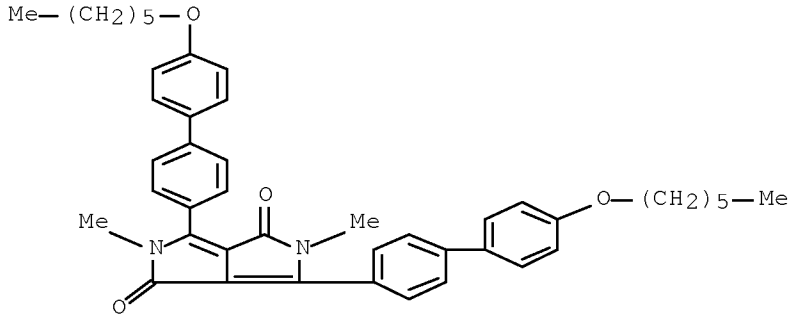


RN 107680-85-3 CAPLUS

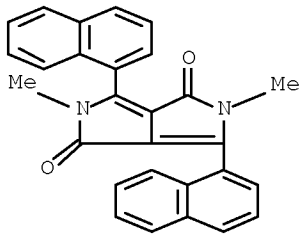
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



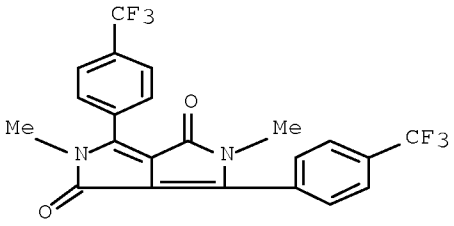
RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



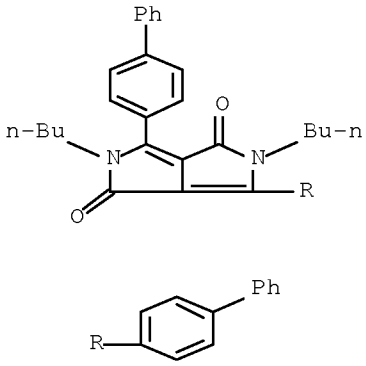
RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



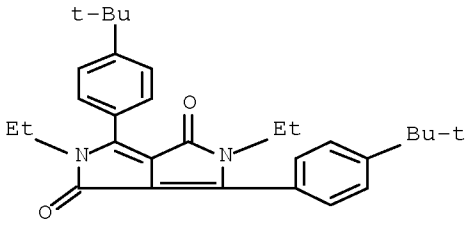
RN 477719-72-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)



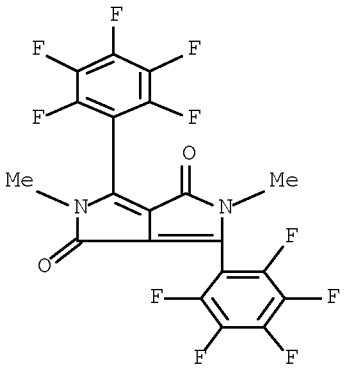
RN 536761-55-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dibutyl-2,5-dihydro- (CA INDEX NAME)



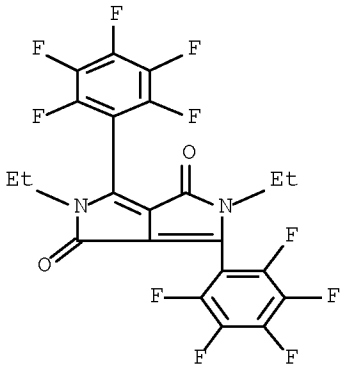
RN 724789-02-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



RN 724789-03-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(2,3,4,5,6-pentafluorophenyl)- (CA INDEX NAME)



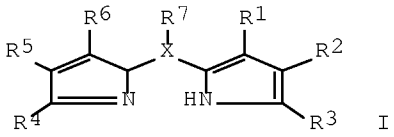
RN 724789-05-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis(pentafluorophenyl)- (9CI) (CA INDEX NAME)



L62 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:569278 CAPLUS Full-text
DOCUMENT NUMBER: 141:131039
TITLE: Electroluminescent device
INVENTOR(S): Murase, Seiichiro; Tominaga, Takeshi; Kitazawa, Daisuke
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004200162	A	20040715	JP 2003-407179	20031205 <--
PRIORITY APPLN. INFO.:			JP 2002-353461 A	20021205 <--

OTHER SOURCE(S): MARPAT 141:131039
GI

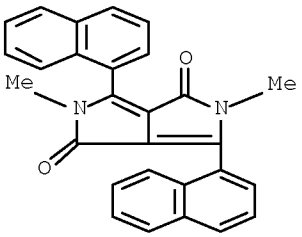


I

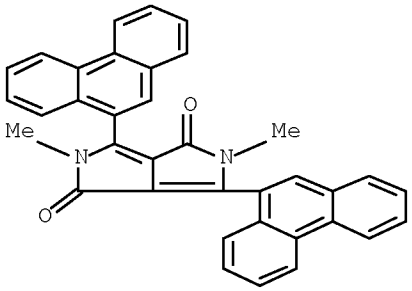
AB The invention relates to an electroluminescent device, suited for use in making a white light-emitting device, comprising an electroluminescent layer containing a pyrromethene compound or its metal complex, represented by I [R1-7 = H, alkyl, cycloalkyl, etc.; X = N and C, when X = N, then R7 = null], and an electron transporting layer having the ionization potential ≥ 5.8 eV. The metal forming the complex with the pyrromethene compound I is selected from B, Be, Mg,Cr, Fe, Co, Ni, Cu, Zn, and Pt.

IT 474067-56-6 474067-66-8 721969-92-2
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(host material of electroluminescent layer; organic electroluminescent device)

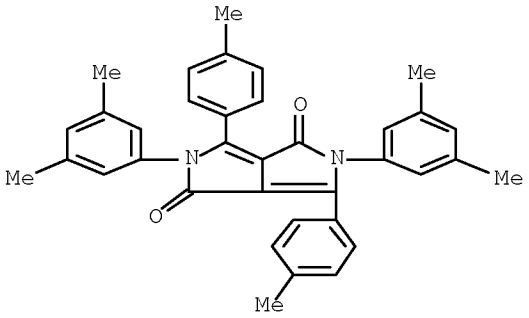
RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 474067-66-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



RN 721969-92-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(3,5-dimethylphenyl)-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



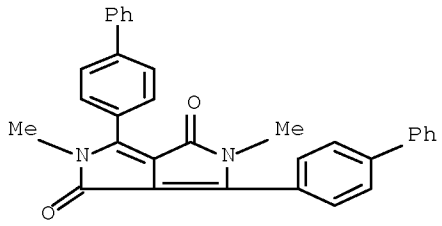
L62 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:454417 CAPLUS Full-text
DOCUMENT NUMBER: 139:28484
TITLE: Composite for organic electroluminescent device comprising perylene and diketopyrrolopyrrole derivatives
INVENTOR(S): Onikubo, Toshikazu; Oryu, Yoshitake; Amano, Masaomi; Maki, Shinichiro; Yanai, Hiroyuki; Yagi, Tadao
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003048268	A1	20030612	WO 2002-JP12592		20021202 <--
W: CN, JP, KR, US					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR					
CN 1526002	A	20040901	CN 2002-813893		20021202 <--
EP 1452574	A1	20040901	EP 2002-781866		20021202 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK					
JP 3835454	B2	20061018	JP 2003-549450		20021202 <--
US 2004151944	A1	20040805	US 2003-482289		20031230 <--
PRIORITY APPLN. INFO.:			JP 2001-368036	A	20011203 <--
			JP 2002-18009	A	20020128 <--
			WO 2002-JP12592	W	20021202 <--

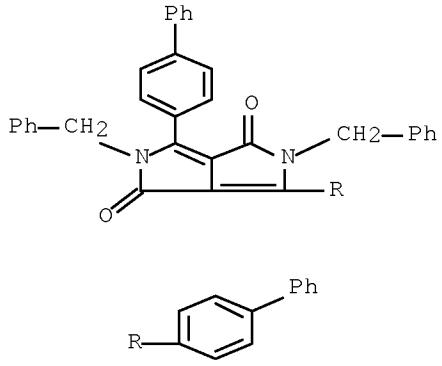
OTHER SOURCE(S): MARPAT 139:28484
AB The invention refers to an organic electroluminescent device comprising a perylene derivative and a diketopyrrolopyrrole derivative The device may also contain a compound having a fluorescence peak > 550 nm, and 5% of another compound relative to the first having a fluorescence spectrum 500 - 800 nm wherein the region > 600 nm is < 20% of the entire spectrum.
IT 177580-90-4 331678-08-1 474067-56-6
488134-89-0 532952-64-0 532952-65-1
532952-67-3 532952-68-4 536761-55-4
536761-56-5 536761-57-6 536761-58-7
536761-59-8 536761-60-1 536761-61-2
536761-62-3 536761-63-4 536761-65-6

536761-66-7 536761-67-8 536761-68-9
536761-69-0 536761-70-3 536761-71-4
536761-72-5 536761-74-7 536761-75-8
536761-82-7 536761-83-8 536761-84-9
536761-85-0 536761-86-1 536761-87-2
536761-88-3 536761-89-4 536761-90-7
536761-93-0 536761-94-1
RL: DEV (Device component use); USES (Uses)
(composite for organic electroluminescent device comprising perylene and diketopyrrolopyrrole derivs.)

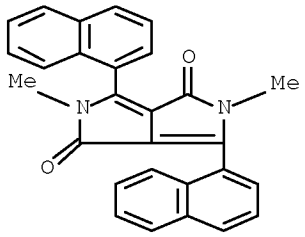
RN 177580-90-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



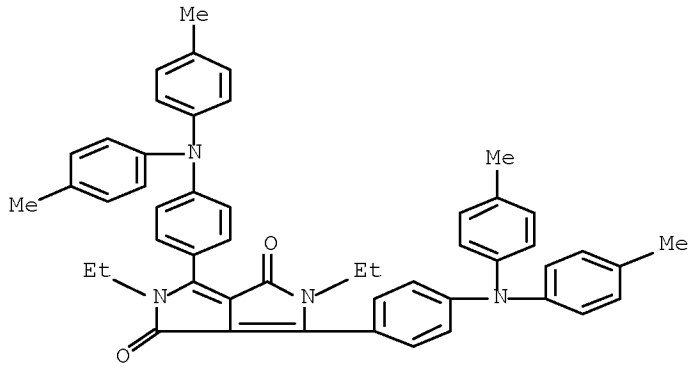
RN 331678-08-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 488134-89-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



RN 532952-64-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

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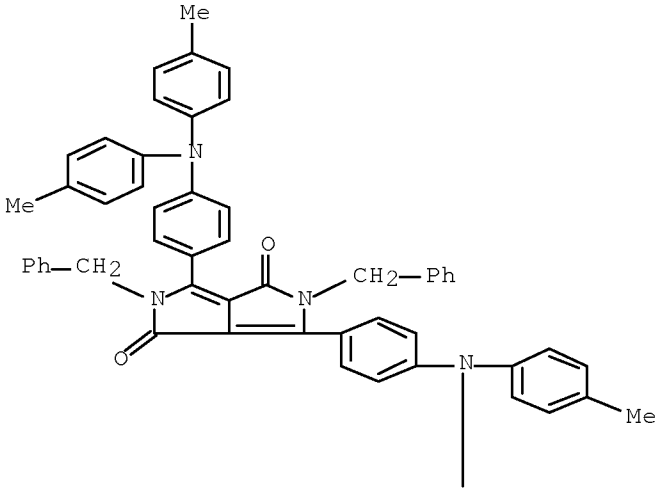

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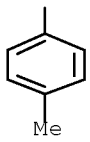

RN 532952-65-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dibutyl-6-[4-(diphenylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)

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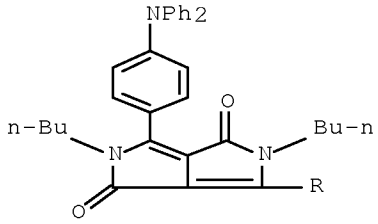

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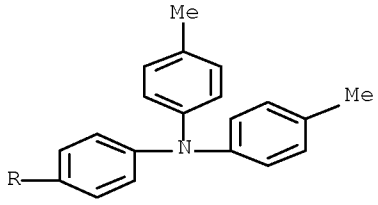

RN 532952-67-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis([1,1'-biphenyl]-4-yl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

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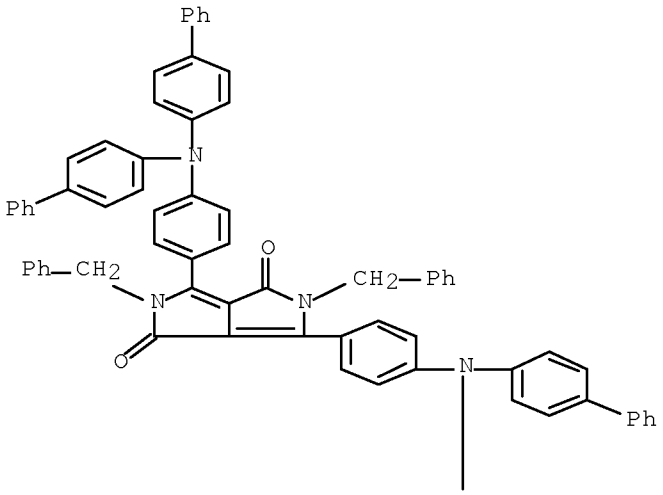

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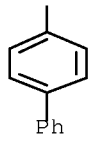

RN 532952-68-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

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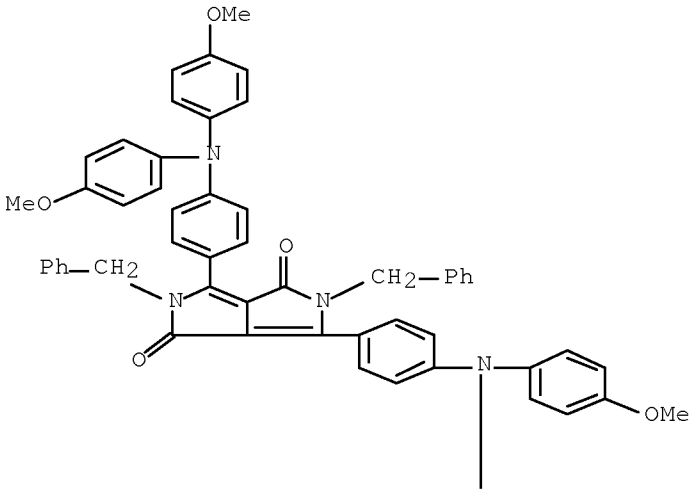

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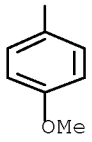
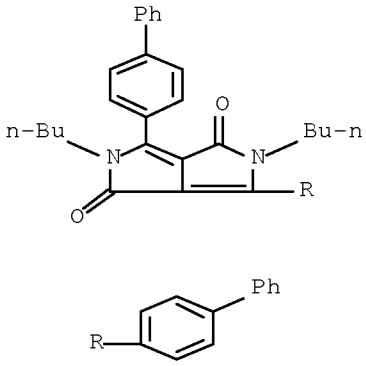
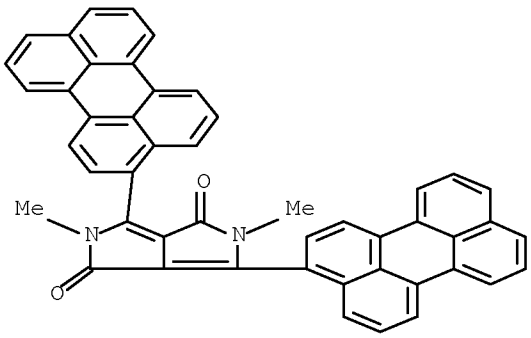


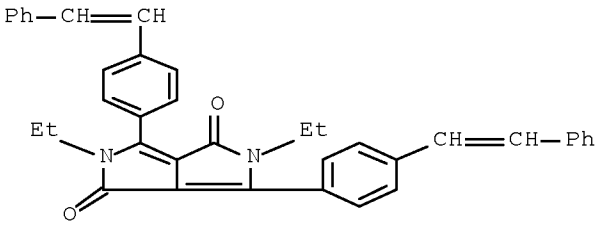
RN 536761-55-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dibutyl-2,5-dihydro- (CA INDEX NAME)



RN 536761-56-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-3-perylenyl- (CA INDEX NAME)



RN 536761-57-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4-(2-phenylethenyl)phenyl]- (CA INDEX NAME)



RN 536761-58-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis[4-(methylthio)phenyl]amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

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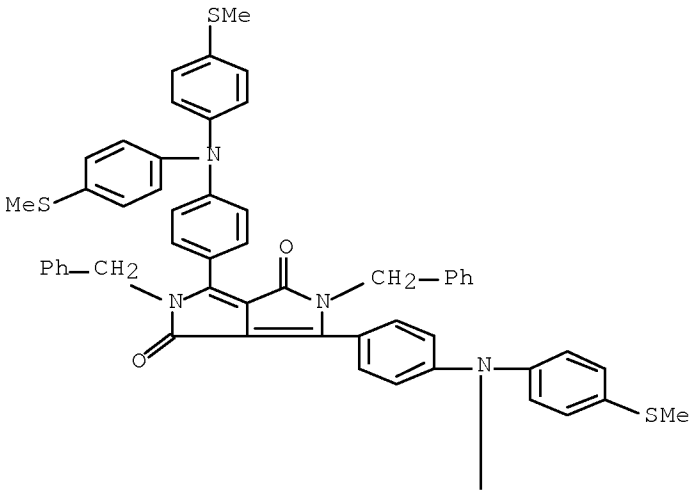

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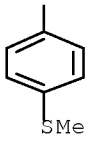
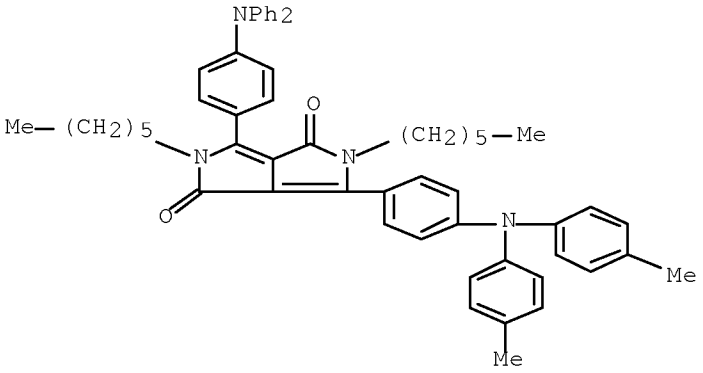
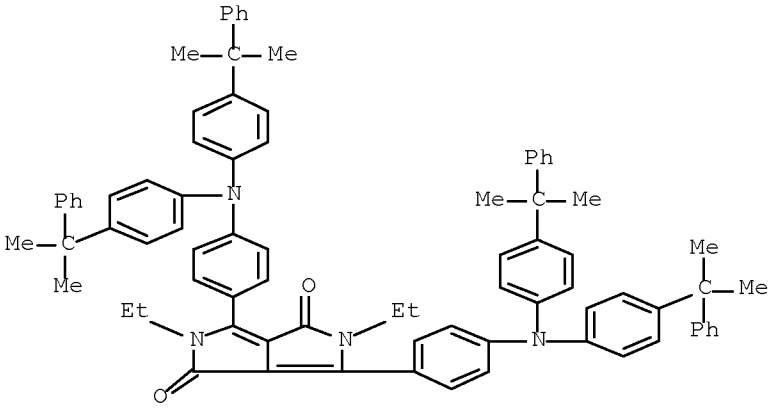


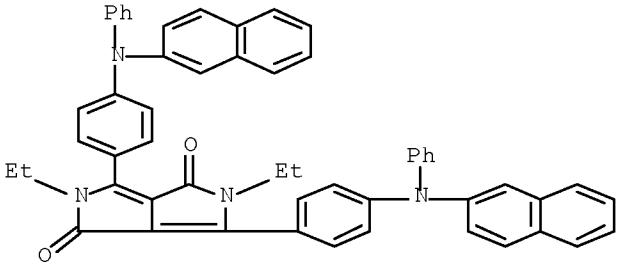
RN 536761-59-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[4-[bis(4-methylphenyl)amino]phenyl]-6-[4-(diphenylamino)phenyl]-2,5-dihexyl-2,5-dihydro- (CA INDEX NAME)



RN 536761-60-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis[4-(1-methyl-1-phenylethyl)phenyl]amino]phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



RN 536761-61-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4-(2-naphthalenylphenylamino)phenyl]- (CA INDEX NAME)



RN 536761-62-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis([1,1'-biphenyl]-4-yl)amino]phenyl]-2,5-bis(1,1-dimethylethyl)-2,5-dihydro- (CA INDEX NAME)

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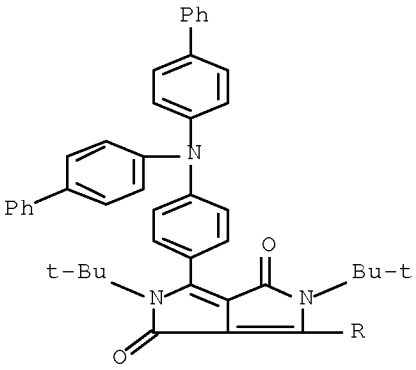

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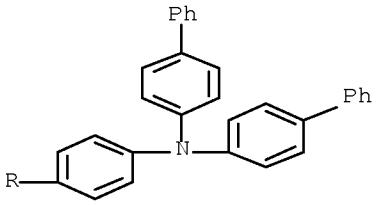

RN 536761-63-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(2-phenylethyl)- (CA INDEX NAME)

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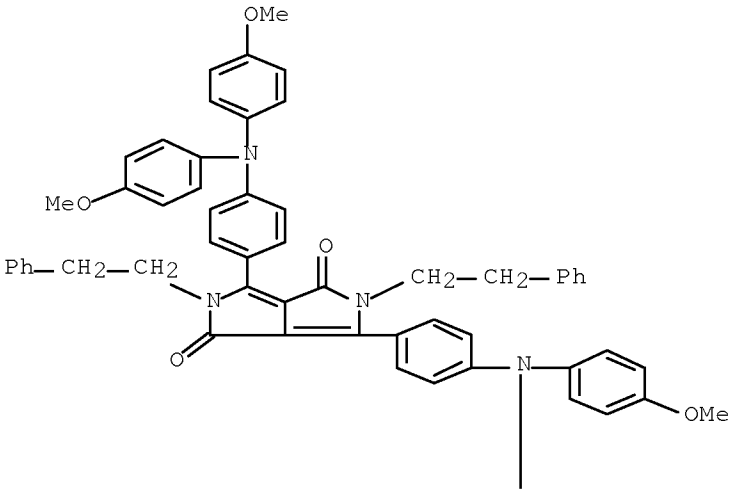

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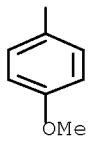

RN 536761-65-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]-1-naphthalenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

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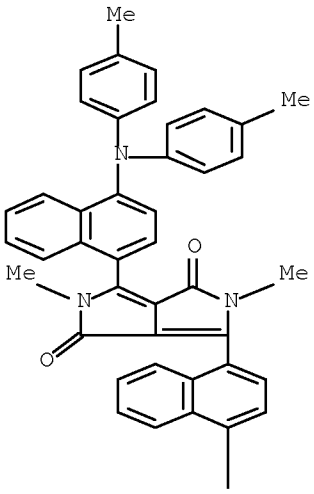

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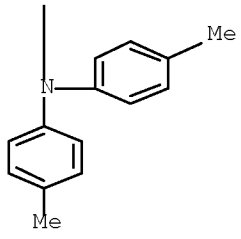
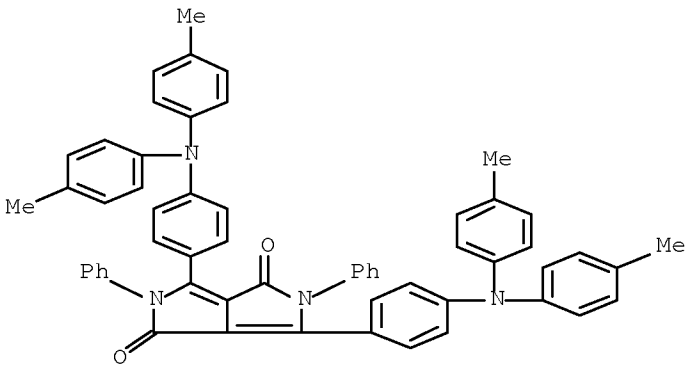
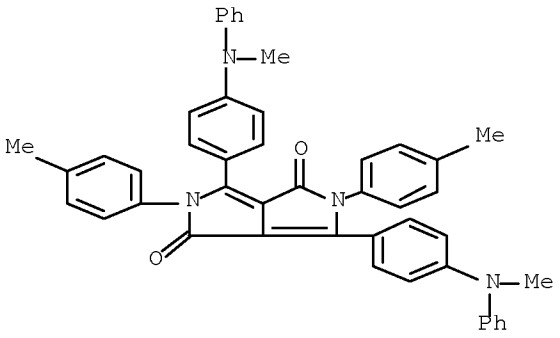


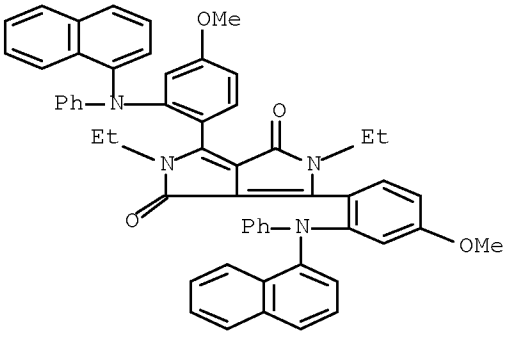
RN 536761-66-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-diphenyl- (CA INDEX NAME)



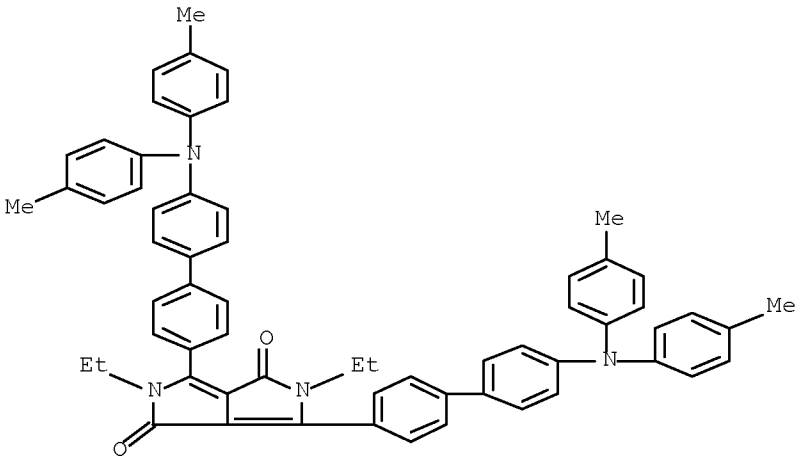
RN 536761-67-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis(4-methylphenyl)-3,6-bis[4-(methylphenylamino)phenyl]- (CA INDEX NAME)



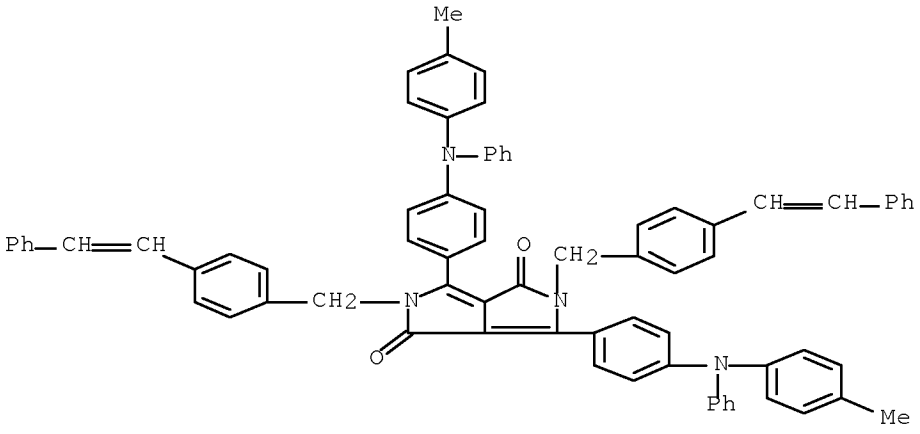
RN 536761-68-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4-methoxy-2-(1-naphthalenylphenylamino)phenyl]- (CA INDEX NAME)



RN 536761-69-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-[bis(4-methylphenyl)amino][1,1'-biphenyl]-4-yl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



RN 536761-70-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-[(4-methylphenyl)phenylamino]phenyl]-2,5-bis[[4-(2-phenylethenyl)phenyl]methyl]- (CA INDEX NAME)



RN 536761-71-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[4-[bis(4-methylphenyl)amino]phenyl]methyl]-2,5-dihydro-3,6-bis(4-methoxyphenyl)- (CA INDEX NAME)

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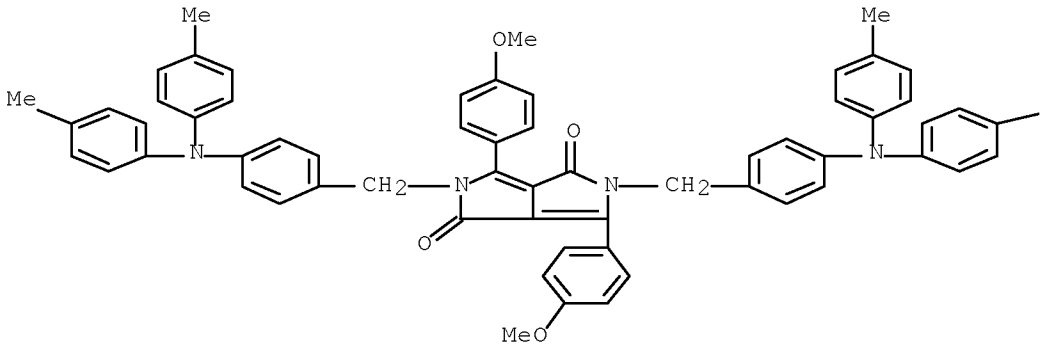

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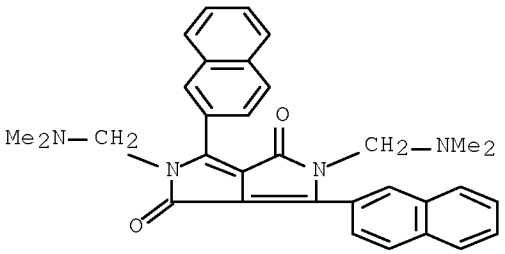
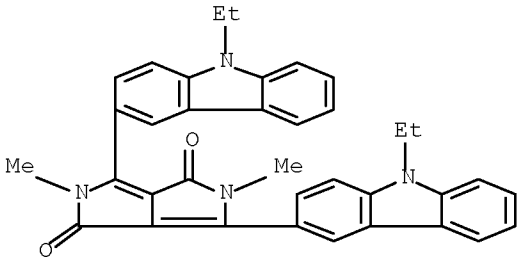
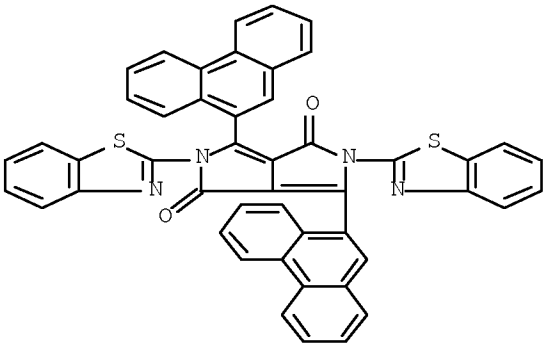
RN 536761-72-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(dimethylamino)methyl]-2,5-dihydro-3,6-di-2-naphthalenyl- (CA INDEX NAME)



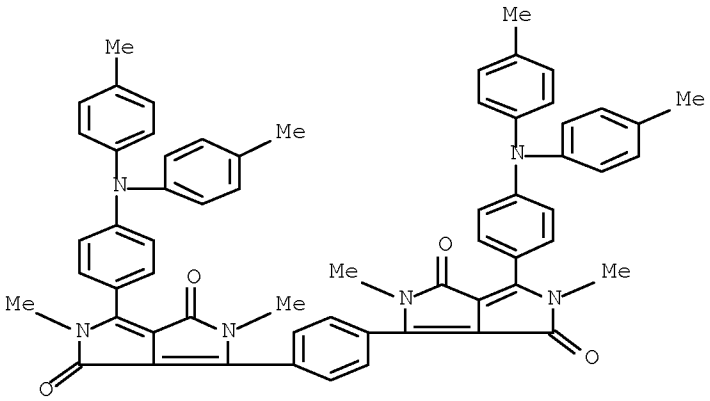
RN 536761-74-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(9-ethyl-9H-carbazol-3-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



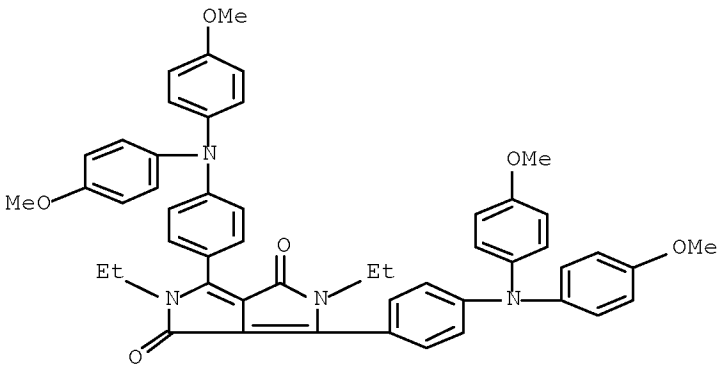
RN 536761-75-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(2-benzothiazolyl)-2,5-dihydro-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



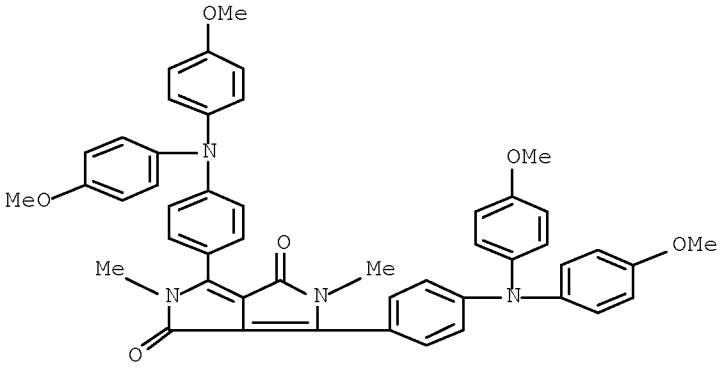
RN 536761-82-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,3'-(1,4-phenylene)bis[6-[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



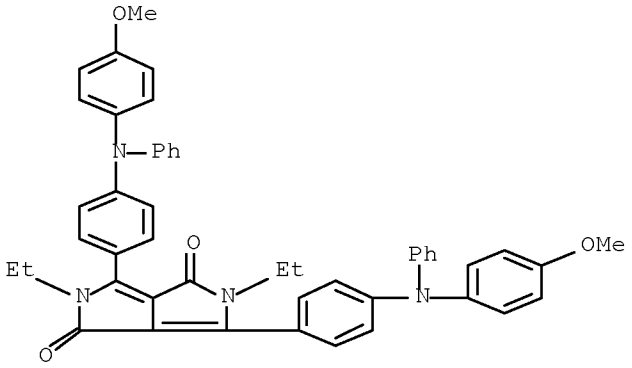
RN 536761-83-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



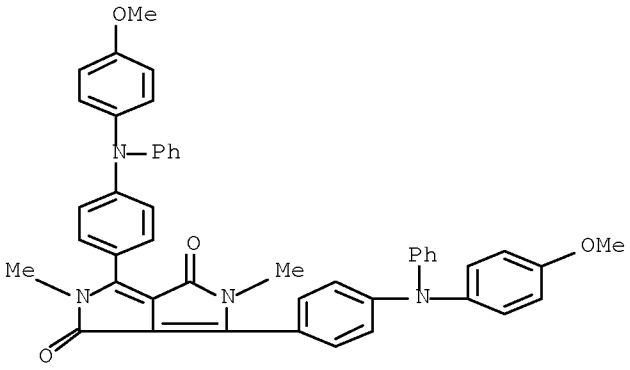
RN 536761-84-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methoxyphenyl)amino]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



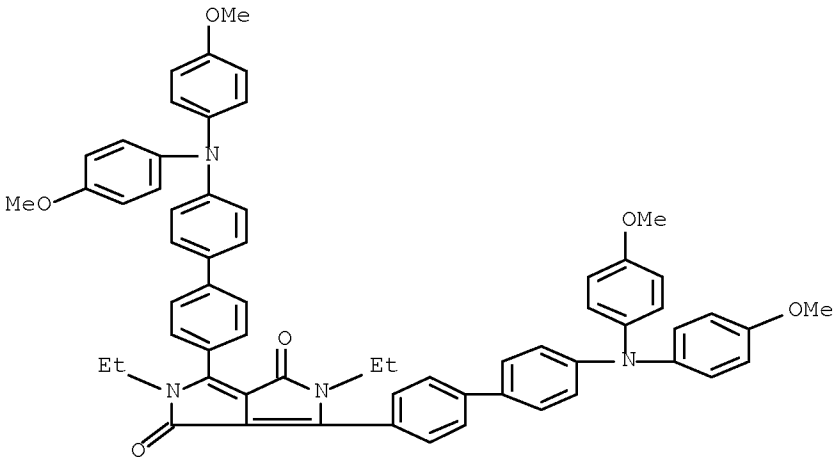
RN 536761-85-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4-[(4-methoxyphenyl)phenylamino]phenyl]- (CA INDEX NAME)



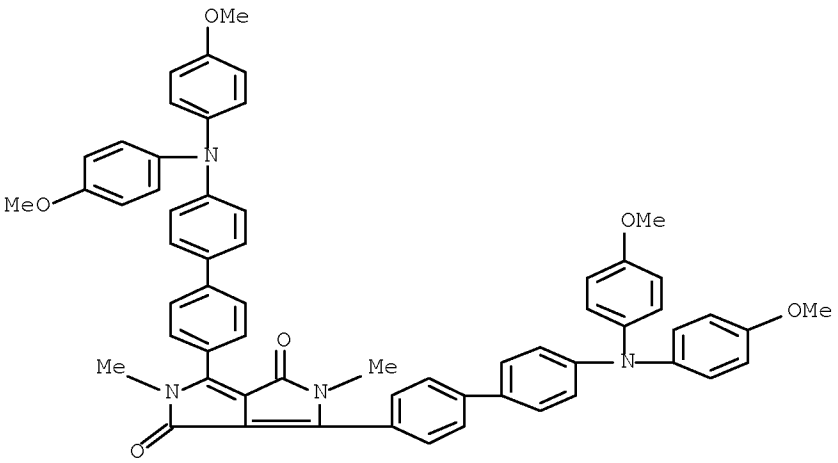
RN 536761-86-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-[(4-methoxyphenyl)phenylamino]phenyl]-2,5-dimethyl- (CA INDEX NAME)



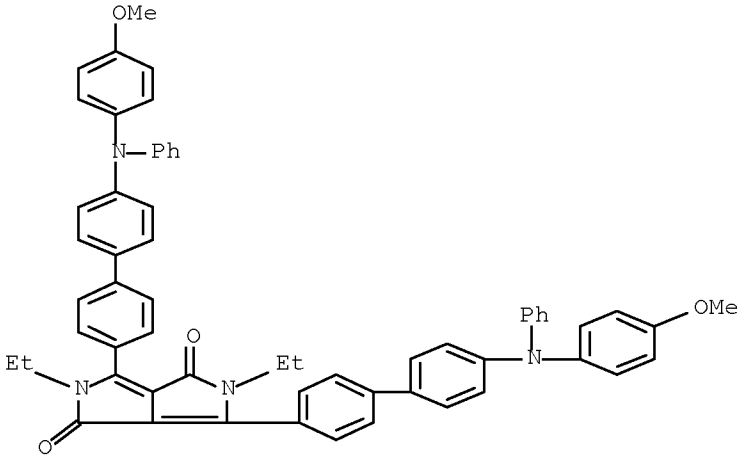
RN 536761-87-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-[bis(4-methoxyphenyl)amino][1,1'-biphenyl]-4-yl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



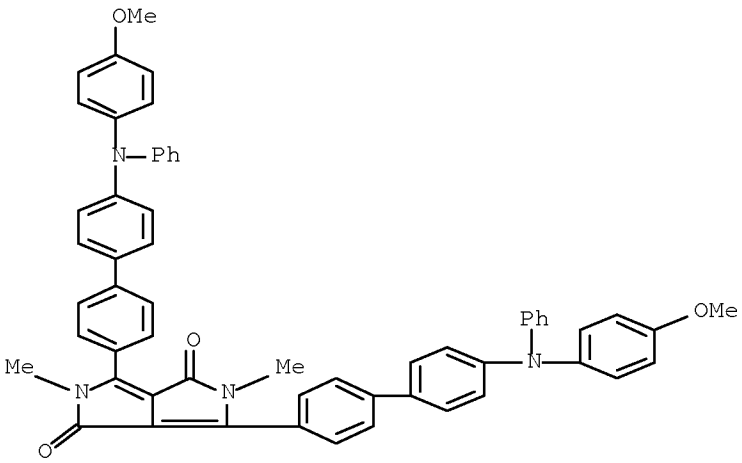
RN 536761-88-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-[bis(4-methoxyphenyl)amino][1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



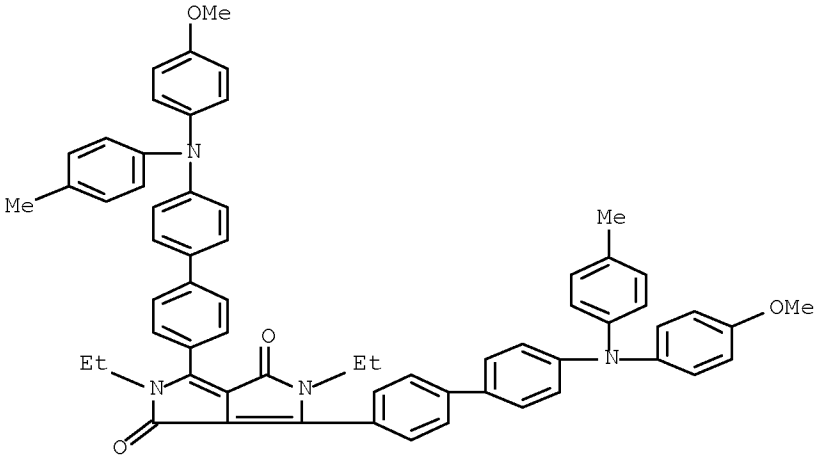
RN 536761-89-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-[(4-methoxyphenyl)phenylamino][1,1'-biphenyl]-4-yl]- (CA INDEX NAME)



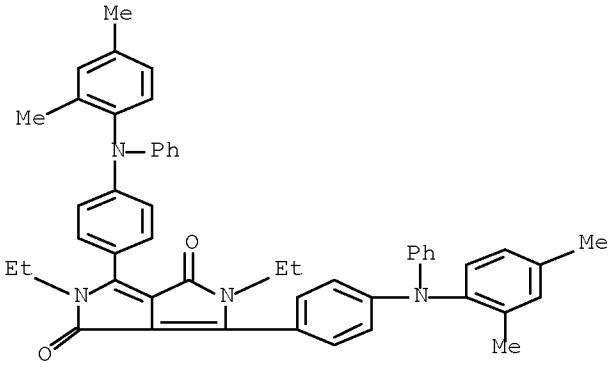
RN 536761-90-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4'-[(4-methoxyphenyl)phenylamino][1,1'-biphenyl]-4-yl]-2,5-dimethyl- (CA INDEX NAME)



RN 536761-93-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-[(4-methoxyphenyl)(4-methylphenyl)amino][1,1'-biphenyl]-4-yl]- (CA INDEX NAME)



RN 536761-94-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[(2,4-dimethylphenyl)phenylamino]phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)

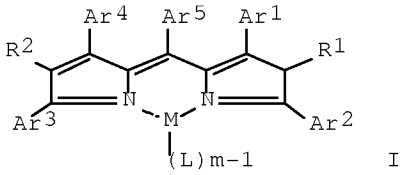


REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:831834 CAPLUS Full-text
DOCUMENT NUMBER: 137:343709
TITLE: Pyrromethene metal complexes and light emitting device composition and light emitting devices using the same
INVENTOR(S): Murase, Seiichiro; Tominaga, Tsuyoshi; Kohama, Akira
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Eur. Pat. Appl., 54 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
EP 1253151	A1	20021030	EP 2002-252947		20020425	<--
EP 1253151	B1	20050112				
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR						
TW 565604	B	20031211	TW 2002-91107585		20020415	<--
JP 2003012676	A	20030115	JP 2002-117229		20020419	<--
JP 4000893	B2	20071031				
US 2003082406	A1	20030501	US 2002-126652		20020422	<--
US 6805978	B2	20041019				
SG 121713	A1	20060526	SG 2002-2483		20020424	<--
CN 1390841	A	20030115	CN 2002-124569		20020425	<--
AT 286903	T	20050115	AT 2002-252947		20020425	<--
CN 1690162	A	20051102	CN 2005-10071206		20020425	<--
JP 2003086379	A	20030320	JP 2002-150546		20020524	<--
PRIORITY APPLN. INFO.:			JP 2001-127311	A	20010425	<--
			JP 2001-158325	A	20010528	<--
			CN 2002-124569	A3	20020425	<--

OTHER SOURCE(S): MARPAT 137:343709
GI



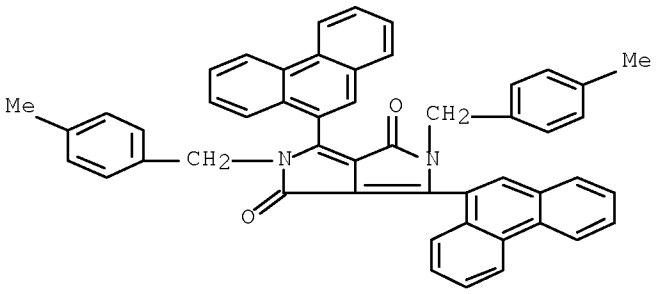
I

AB Pyrromethene metal complexes are described by the general formula I (R1, R2, and each L = independently selected H, alkyl, cycloalkyl, aralkyl, alkenyl, cycloalkenyl, alkynyl, hydroxyl, mercapto, alkoxy, alkylthio, aryl ether, aryl thioether, aryl, heterocyclic, halogen, haloalkane, haloalkene, haloalkyne, cyano, aldehyde, carbonyl, carboxyl, ester, carbamoyl, amino, nitro, silyl, siloxanyl, and fused aromatic and alicyclic rings formed from Ar1-4 and L; M + a metal having a valence of m selected from boron, beryllium, magnesium, chromium, iron, nickel, copper, zinc, and platinum; and Ar1-5 = independently selected optionally substituted aryl groups with the proviso that any of Ar1-4, together with an adjacent group selected from R1, R2 and the or each group L may form a fused aromatic or alicyclic ring). Light-emitting devices comprising ≥1 of a diketopyrrolo[3,4-c]pyrrole derivative and an organic fluorescent material having a fluorescent peak wavelength in the range 580-720 nm; and a light-emitting device composition containing I are also described.

IT 361196-18-1 427375-50-6 427375-51-7
427375-52-8 427375-53-9 474067-29-3
474067-31-7 474067-33-9 474067-35-1
474067-38-4 474067-42-0 474067-46-4
474067-56-6 474067-63-5 474067-66-8
RL: DEV (Device component use); USES (Uses)
(pyrromethene metal complexes and light-emitting device compns. and the devices)

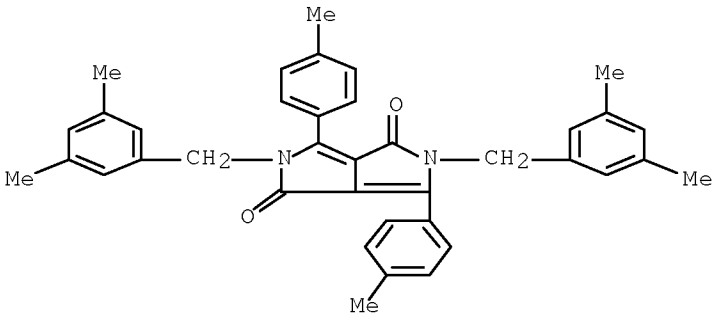
RN 361196-18-1 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

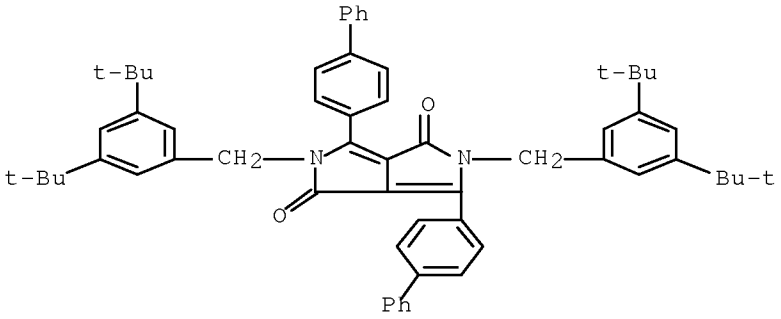


RN 427375-50-6 CAPLUS

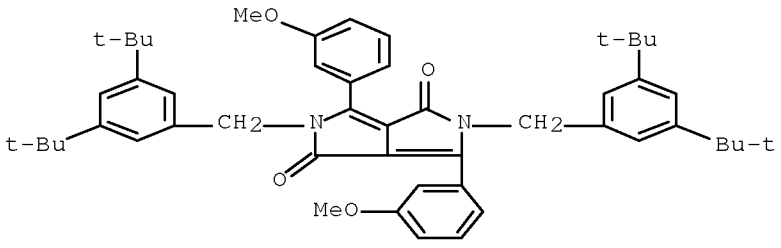
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



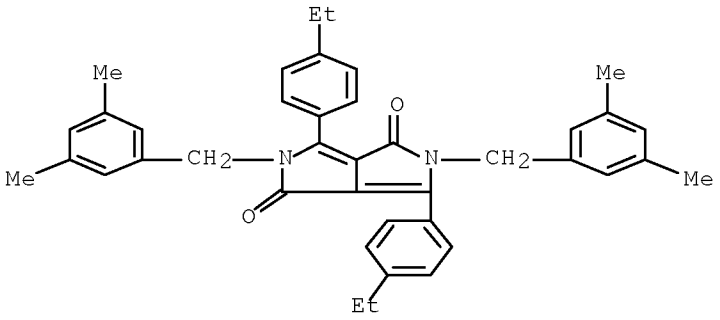
RN 427375-51-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro- (CA INDEX NAME)



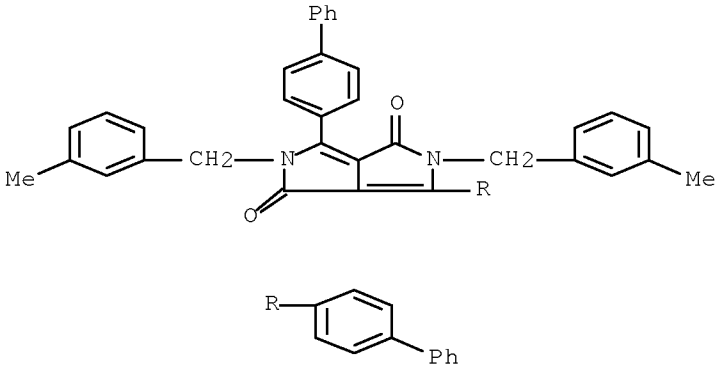
RN 427375-52-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-bis(3-methoxyphenyl)- (CA INDEX NAME)



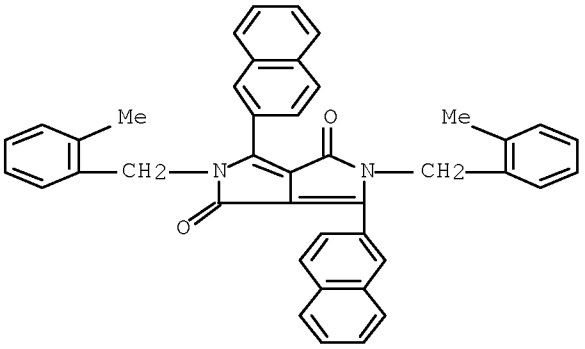
RN 427375-53-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-3,6-bis(4-ethylphenyl)-2,5-dihydro- (CA INDEX NAME)



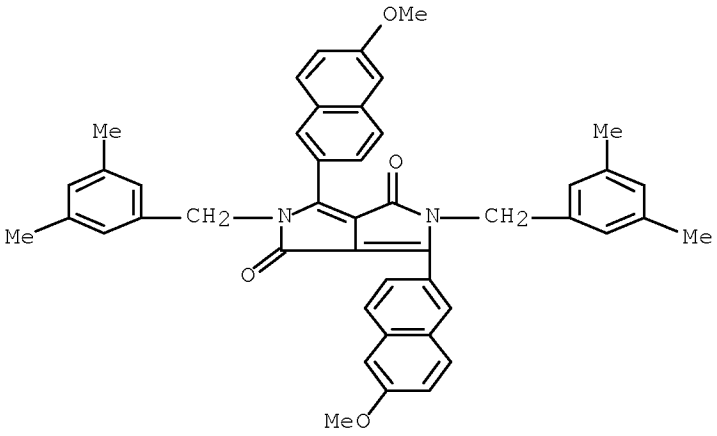
RN 474067-29-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis[(3-methylphenyl)methyl]- (CA INDEX NAME)



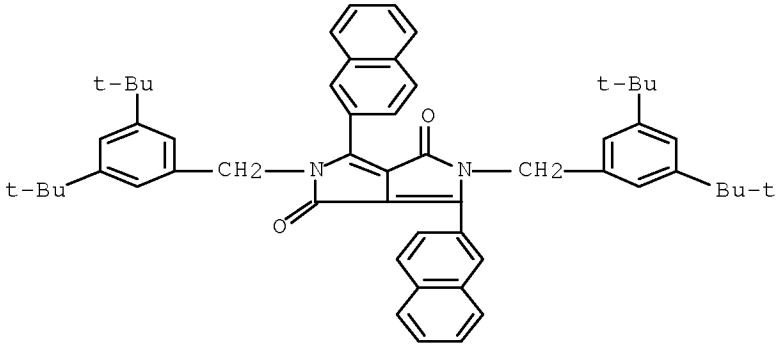
RN 474067-31-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(2-methylphenyl)methyl]-3,6-di-2-naphthalenyl- (CA INDEX NAME)



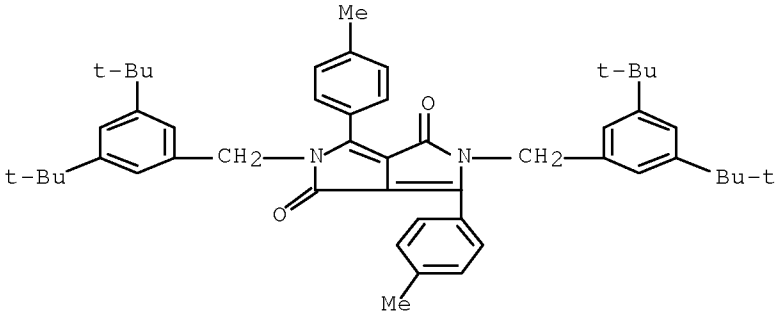
RN 474067-33-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-bis(6-methoxy-2-naphthalenyl)- (CA INDEX NAME)



RN 474067-35-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-di-2-naphthalenyl- (CA INDEX NAME)

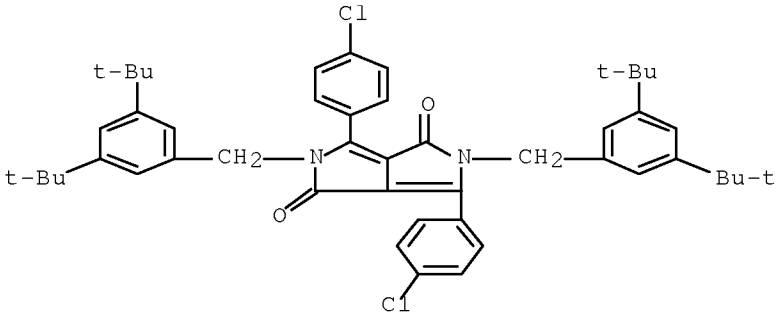


RN 474067-38-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)

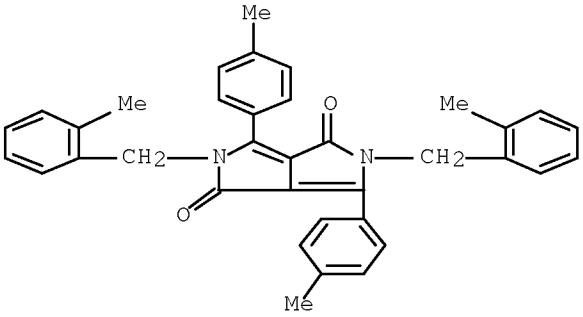


RN 474067-42-0 CAPLUS

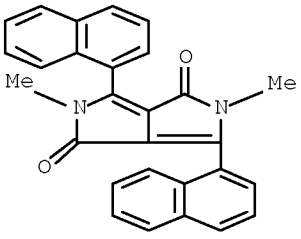
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-3,6-bis(4-chlorophenyl)-2,5-dihydro- (CA INDEX NAME)



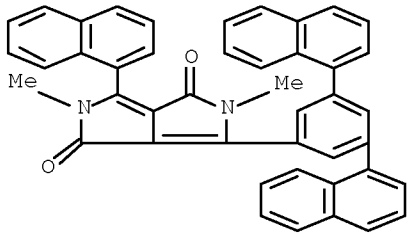
RN 474067-46-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-2,5-bis[(2-methylphenyl)methyl]- (CA INDEX NAME)



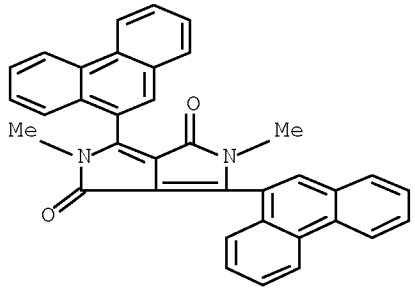
RN 474067-56-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-1-naphthalenyl- (CA INDEX NAME)



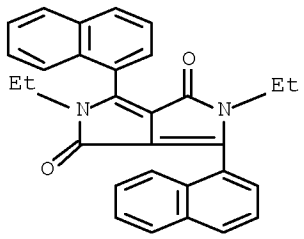
RN 474067-63-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(3,5-di-1-naphthalenylphenyl)-2,5-dihydro-2,5-dimethyl-6-(1-naphthalenyl)- (CA INDEX NAME)



RN 474067-66-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-9-phenanthrenyl- (CA INDEX NAME)

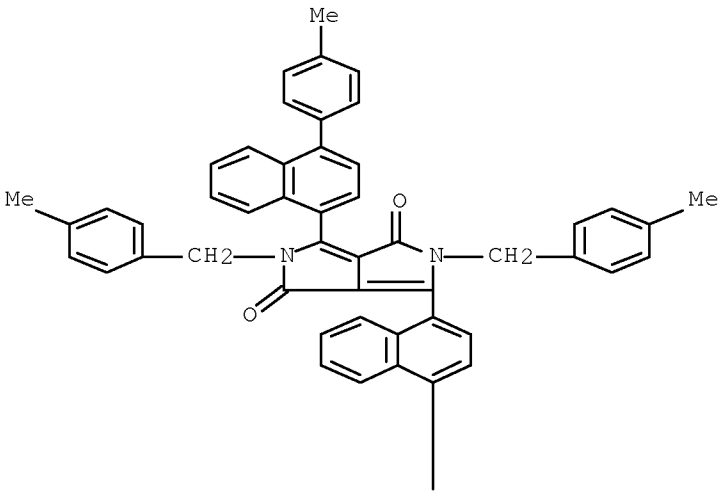


IT 361196-16-9P 361196-19-2P 474067-61-3P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(pyrromethene metal complexes and light-emitting device compns. and the devices)
RN 361196-16-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)

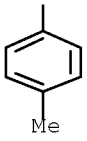


RN 361196-19-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-bis[4-(4-methylphenyl)-1-naphthalenyl]- (CA INDEX NAME)

PAGE 1-A

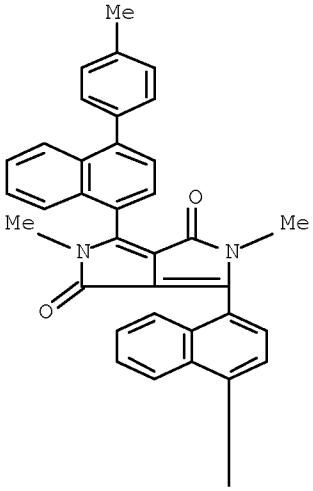


PAGE 2-A

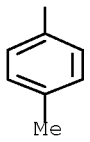


RN 474067-61-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(4-methylphenyl)-1-naphthalenyl]- (CA INDEX NAME)

PAGE 1-A

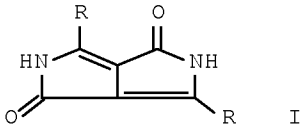


PAGE 2-A



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:712239 CAPLUS Full-text
DOCUMENT NUMBER: 138:116787
TITLE: DPP dyes as ligands in transition-metal complexes
AUTHOR(S): Lorenz, Ingo-Peter; Limmert, Michael; Mayer, Peter; Piotrowski, Holger; Langhals, Heinz; Poppe, Martin; Polborn, Kurt
CORPORATE SOURCE: Department Chemie, Universitat Munchen, Munchen, 81377, Germany
SOURCE: Chemistry--A European Journal (2002), 8(17), 4047-4055
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:116787
GI



I

AB The DPP dyes (= diketopyrrolopyrrole) (I; R = Ph, 4-Me, 4-Cl, 4-NCC6H4, 4-pyridyl, 4-thienyl) (H2L) are deprotonated to give the corresponding dianions. These are treated with two moles of the transition-metal complexes [LnMX] = [(Ph3P)2MX] (M = Cu, Ag; X = Cl, NO3), [(Ph3P)AuCl], [(Et3P)AuCl], [(tBuNC)AuCl], [(Ph3P)2PdCl2], and [(Ph3P)2PtCl2] to give the novel bismetalated DPP dyes [L1nM(μ-L)ML1n] (M = Cu, Ag, Au, PdCl, PtCl; L1 = PPh3, PEt3, t-BuNC). In comparison with the starting materials, these compds. show better solubilities, high fluorescence quantum yields (Φ ≥ 80%), and bathochromic absorptions. The compds. [PPh3Cu(μ-L)CuPPh3] (R = 4-ClC6H4) 4c, [Ph3PAg(μ-L)AgPPh3] (R = Ph) 5a, [Ph3PAu(μ-L)AuPPh3] (R = 4-MeC6H4 6b, p-ClC6H4 6c, 4-pyridyl 6e), [Et3PAu(μ-L)AuPEt3] (R = 4-ClC6H4) 7c, and [t-BuNCAu(μ-L)AuCNBu-t] (R = 4-ClC6H4) 8c were characterized by x-ray crystallog. The Cu and Ag atoms in 4c and 5a are trigonal planar and are surrounded by the P atoms of the phosphine ligands and the N atom of the DPP dianion of I. Both metals are somewhat forced out-of-plane, and the P2M plane and the Ph planes

of R1 are twisted by >70° and <25°, resp., towards the chromophore plane. The Au atoms in 6-8 are linearly coordinated to one N and one P (6b, c, e, 7c) or one C atom (8c), resp. The Au atoms are only slightly pressed out-of-plane, and the P substituents are staggered so that there is enough space for the planarization of R1 into the plane of the chromophore. Compound 8c shows intermol. d10-d10 interactions between Au1 centers of different mols., and these interactions lead to infinite chains of parallel oriented mols. in a gauche conformation of neighbors (torsion angle = 150°) in the crystal.

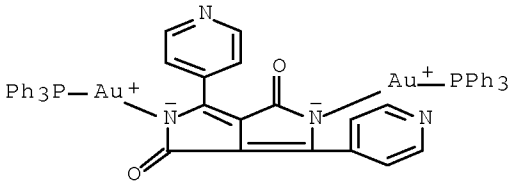
IT 485819-92-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure)

RN 485819-92-9 CAPLUS

CN Gold, [μ-[2,5-dihydro-3,6-di-4-pyridinylpyrrolo[3,4-c]pyrrole-1,4-dionato(2-)-κN2:κN5]]bis(triphenylphosphine)di-, compd. with trichloromethane (1:2) (9CI) (CA INDEX NAME)

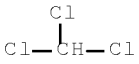
CM 1

CRN 485819-77-0
CMF C52 H38 Au2 N4 O2 P2
CCI CCS



CM 2

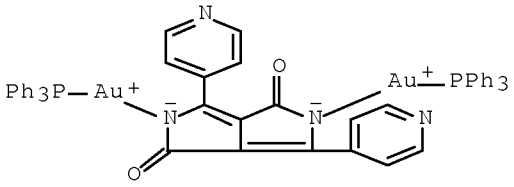
CRN 67-66-3
CMF C H Cl3



IT 485819-77-0P
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and fluorescence)

RN 485819-77-0 CAPLUS

CN Gold, [μ-[2,5-dihydro-3,6-di-4-pyridinylpyrrolo[3,4-c]pyrrole-1,4-dionato(2-)-κN2:κN5]]bis(triphenylphosphine)di- (9CI) (CA INDEX NAME)

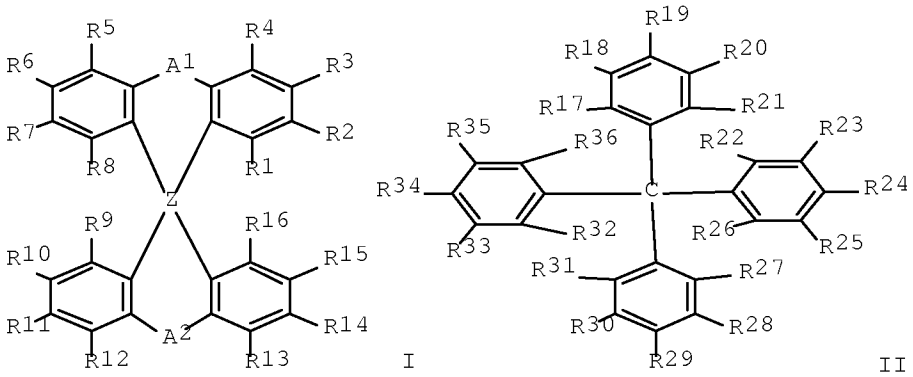


REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:408990 CAPLUS Full-text
DOCUMENT NUMBER: 136:393083
TITLE: Electroluminescent material and component
INVENTOR(S): Tominaga, Tsuyoshi; Kitazawa, Daisuke; Makiyama, Aki; Kohama, Akira
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002043449	A1	20020530	WO 2001-JP10214	20011122 <--
W: CN, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002222697	A	20020809	JP 2001-357312	20011122 <--
JP 3899907	B2	20070328		
EP 1341403	A1	20030903	EP 2001-997977	20011122 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
TW 572993	B	20040121	TW 2001-90128901	20011122 <--
CN 1658724	A	20050824	CN 2005-10058976	20011122 <--
CN 1956237	A	20070502	CN 2006-10143103	20011122 <--
CN 1956238	A	20070502	CN 2006-10143104	20011122 <--
JP 2003059669	A	20030228	JP 2002-163997	20020605 <--
US 2003168970	A1	20030911	US 2002-221342	20020911 <--
US 7318966	B2	20080115		
KR 2007118711	A	20071217	KR 2007-727441	20071126 <--
KR 2007118712	A	20071217	KR 2007-727442	20071126 <--
PRIORITY APPLN. INFO.:			JP 2000-357129 A	20001124 <--
			JP 2001-173610 A	20010608 <--
			CN 2001-804068 A3	20011122 <--
			WO 2001-JP10214 W	20011122 <--
			KR 2002-709422 A3	20020723 <--

OTHER SOURCE(S): MARPAT 136:393083
GI

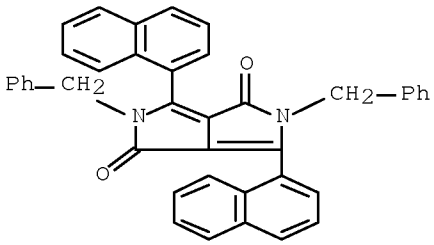


AB The invention refers to an electroluminescent material comprising at least one of the following: a compound with 1,7-phenanthroline skeletons, a benzoquinoline derivative, a spiro-compound I and a tetraphenylmethane derivative II [A1,2 = single bond, (un)substituted alkyl, ether thioether ketone amino chain, A1 ≠ A2; Z = C or Si; R1-16 = H, alkyl, cycloalkyl, aralkyl, alkenyl, cycloalkenyl, alkynyl, hydroxyl, mercapto, alkoxy, alkylthio, arylether, aryl thioether, aryl, heterocyclic, halo, haloalkane, haloalkene, haloalkyne, cyano, aldehyde, carbonyl, carboxyl, ester, carbamoyl, amino, nitro, silyl or siloxanyl, and adjacent groups may join together to form rings; R17-36 = H, alkyl, cycloalkyl, aralkyl, alkenyl, cycloalkenyl alkynyl, hydroxyl, mercapto, alkoxy, alkylthio, aryl ether, aryl thioether, aryl, heterocyclic, halo, haloalkane, haloalkene, haloalkyne, cyano, aldehyde, carbonyl, carboxyl, ester, carbamoyl, amino, nitro, silyl or siloxanyl, and adjacent groups may join together to form rings, wherein at least one of R17-36 is -XAr; X = single bond, -(CH2)n-, O, S, -(Ph)n- or trivalent phosphor oxide; Ar = condensed aromatic or heterocyclic, and when X = trivalent phosphor oxide, Ar = aromatic hydrocarbon or heterocyclic].

IT 361196-13-6 361196-16-9 361196-17-0
361196-19-2 361375-66-8 427375-50-6
427375-51-7 427375-52-8 427375-53-9
RL: DEV (Device component use); USES (Uses)
(luminescent material and component)

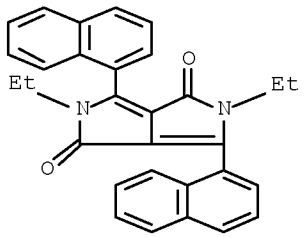
RN 361196-13-6 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)

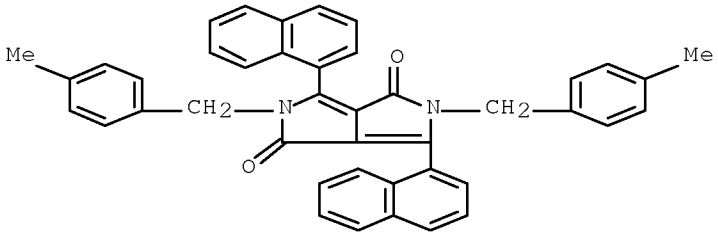


RN 361196-16-9 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)

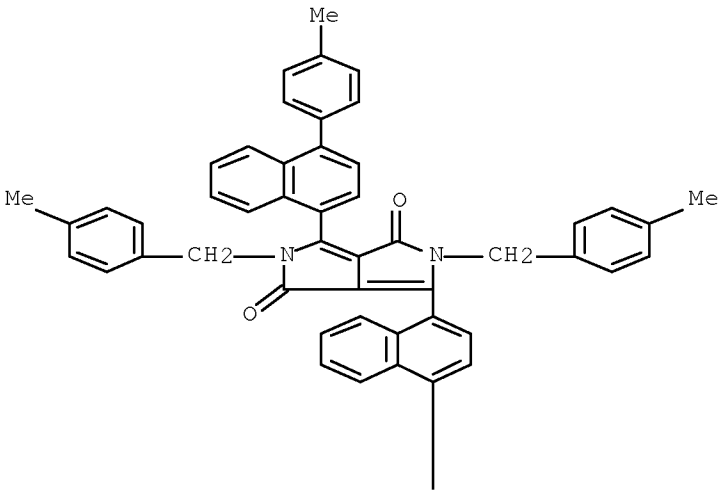


RN 361196-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 361196-19-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-bis[4-(4-methylphenyl)-1-naphthalenyl]- (CA INDEX NAME)

PAGE 1-A



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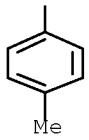
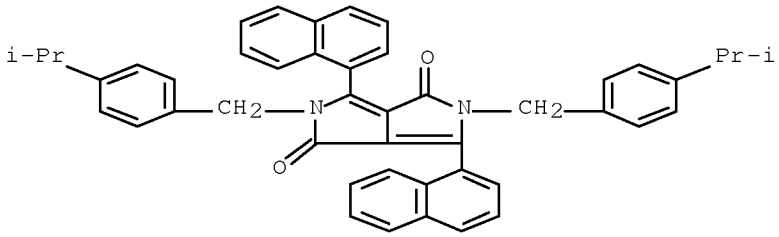
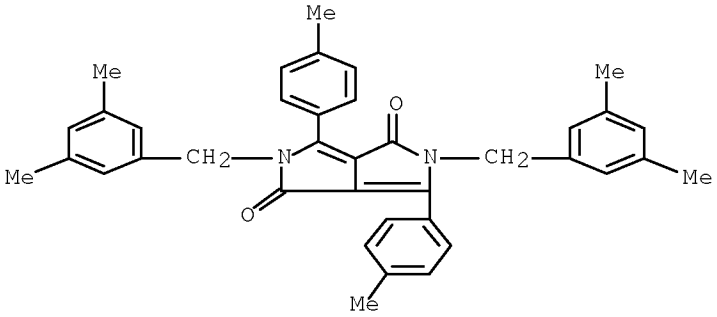


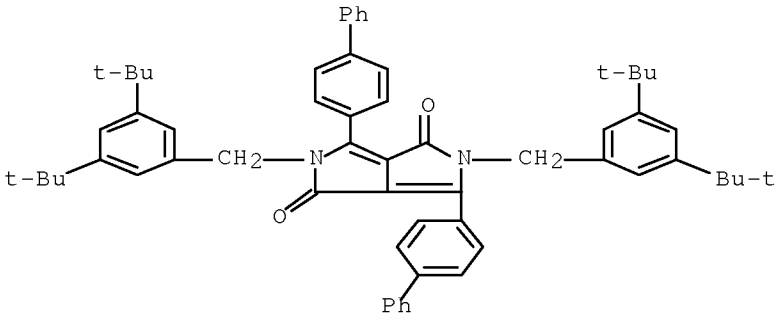
RN 361375-66-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[[4-(1-methylethyl)phenyl]methyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



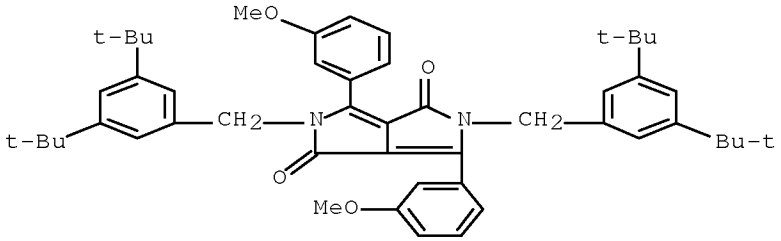
RN 427375-50-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



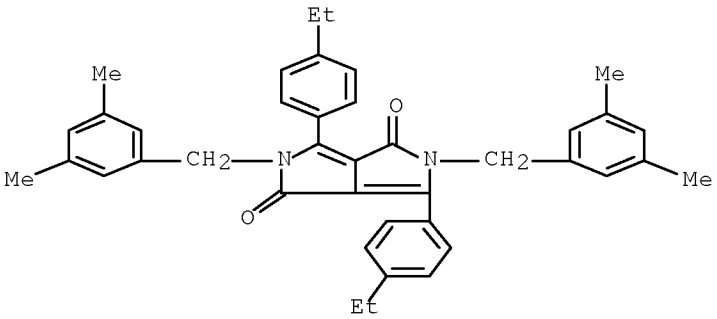
RN 427375-51-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro- (CA INDEX NAME)



RN 427375-52-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[3,5-bis(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-bis(3-methoxyphenyl)- (CA INDEX NAME)



RN 427375-53-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-3,6-bis(4-ethylphenyl)-2,5-dihydro- (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:778307 CAPLUS Full-text
DOCUMENT NUMBER: 135:325082
TITLE: Luminescent component
INVENTOR(S): Tominaga, Takeshi; Murase, Seiichiro; Kohama, Toru
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001297881	A	20011026	JP 2000-110411	20000412 <--
PRIORITY APPLN. INFO.:			JP 2000-110411	20000412 <--

OTHER SOURCE(S): MARPAT 135:325082
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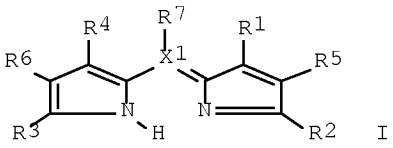
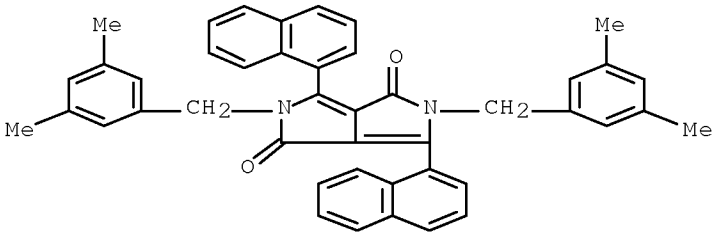


I

AB The invention refers to a electroluminescent component which emits light around 580 - 720 nm, comprising a pyrromethane skeleton I [R1-4 = at least one aromatic ring or aromatic vinyl, and the aromatic rings are substituted with at least one alkyl, alkoxy, aryloxy, thioether, aralkyl or silyl, and where R1-4 which are not aromatic or aromatic vinyl and R5-7 = H, alkyl, alkoxy, halo, aryl, aralkyl, alkenyl, aryloxy, heteroatom, cyano, aldehyde, carbonyl, ester, carbamoyl or amino, and adjacent groups may join together to aliphatic rings; X = C or N, but in the case of X = N, R7 does not exist].

IT 368868-28-4
RL: DEV (Device component use); USES (Uses)
(luminescent component)

RN 368868-28-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



L62 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:692270 CAPLUS Full-text
DOCUMENT NUMBER: 135:249182
TITLE: Organic electroluminescent device elements
INVENTOR(S): Tominaga, Takeshi; Kitazawa, Daisuke; Takano, Akiko; Murase, Seiichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001257078	A	20010921	JP 2000-397145	20001227 <--
JP 2006342167	A	20061221	JP 2006-166948	20060616 <--
PRIORITY APPLN. INFO.:			JP 2000-711 A	20000106 <--
			JP 2000-397145 A3	20001227 <--

OTHER SOURCE(S): MARPAT 135:249182
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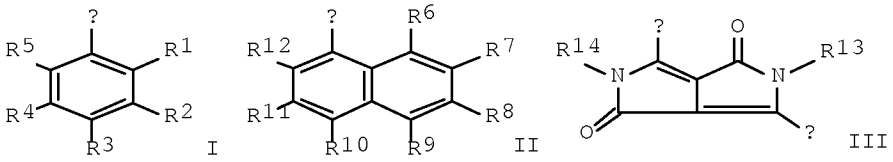
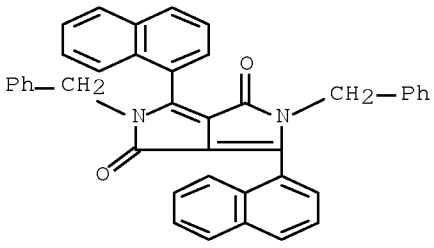


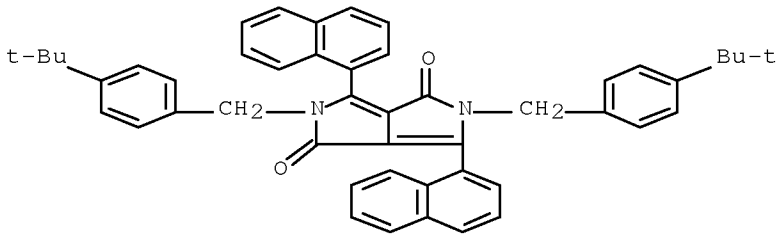
AB The elements comprise a pair of an anode and a cathode interposing a phosphor layer comprising A-(B)n (A = organic phosphor structure; B = substituent; n = 1-4), where B = I or II; and A = III (R1-14 = H, alkyl, cycloalkyl, aralkyl, alkenyl, cyclo alkenyl, alkynyl, OH, mercapto, alkoxy, alkylthio, aryl ether, aryl thioether, aryl, heterocyclic, halo, haloalkene, haloalkane, CN, aldehyde, carbonyl, carboxyl, ester, carbamoyl, amino, nitro, silyl, cycloxanyl; α = linkage to A; β = linkage to B).

IT 361196-13-6 361196-14-7 361196-15-8
361196-16-9 361196-17-0 361196-18-1
361196-19-2
RL: DEV (Device component use); USES (Uses)
(electroluminescent device elements)

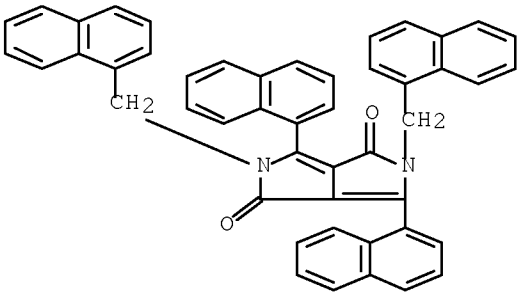
RN 361196-13-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)



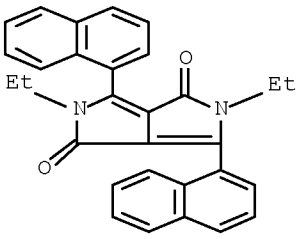
RN 361196-14-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[[4-(1,1-dimethylethyl)phenyl]methyl]-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



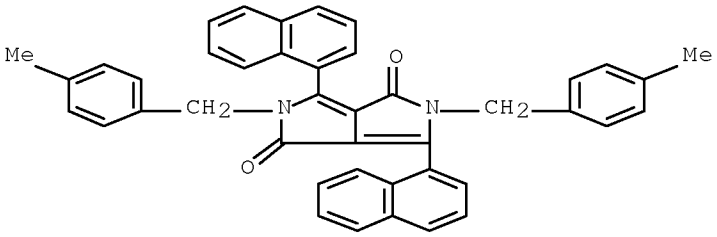
RN 361196-15-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(1-naphthalenylmethyl)- (CA INDEX NAME)



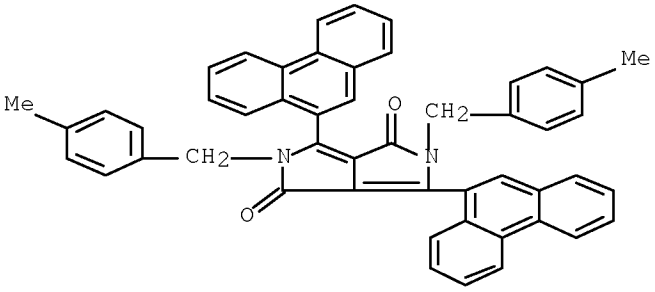
RN 361196-16-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 361196-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 361196-18-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-9-phenanthrenyl- (CA INDEX NAME)



RN 361196-19-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-bis[4-(4-methylphenyl)-1-naphthalenyl]- (CA INDEX NAME)

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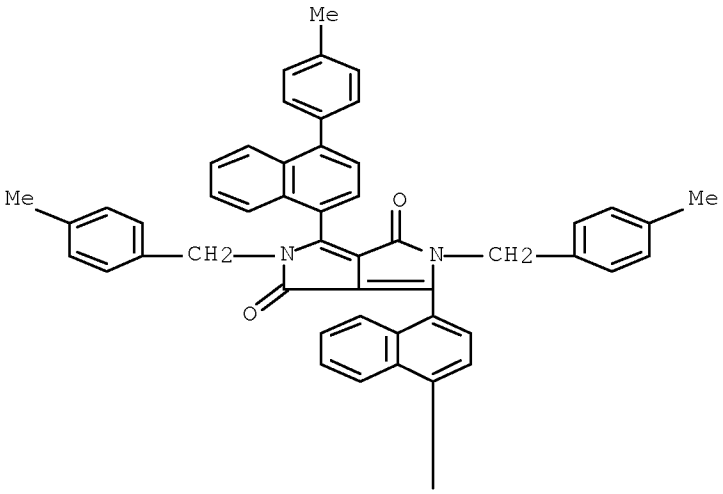
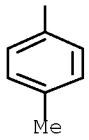


PAGE 2-A



L62 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:692269 CAPLUS Full-text
DOCUMENT NUMBER: 135:264294
TITLE: Organic electroluminescent device elements
INVENTOR(S): Tominaga, Takeshi; Kitazawa, Daisuke; Takano, Akiko; Murase, Seiichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001257077	A	20010921	JP 2000-397144	20001227 <--
PRIORITY APPLN. INFO.:			JP 2000-711 A	20000106 <--
OTHER SOURCE(S):	MARPAT 135:264294			

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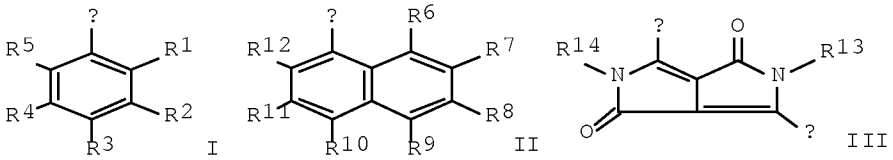
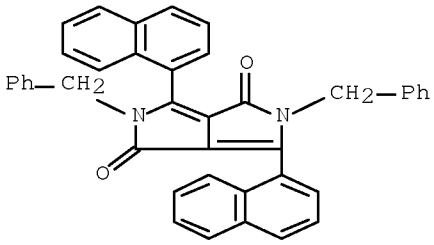


AB The elements comprise a pair of an anode and a cathode interposing a phosphor comprising A-(B)n (A = organic phosphor structure; B = substituent; n = 1-4), where B = I or II; and A = III (R1-14 = H, alkyl, cycloalkyl, aralkyl, alkenyl, cyclo alkenyl, alkynyl, OH, mercapto, alkoxy, alkylthio, aryl ether, aryl thioether, aryl, heterocyclic, halo, haloalkene, haloalkane, CN, aldehyde, carbonyl, carboxyl, ester, carbamoyl, amino, nitro, silyl, cycloxanyl; α = linkage to A; β = linkage to B).

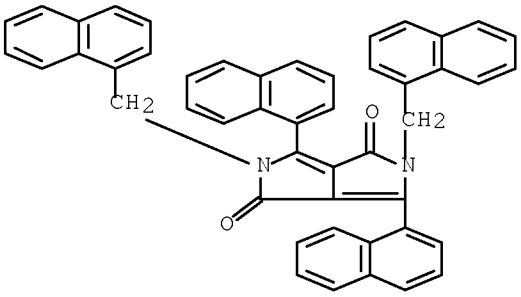
IT 361196-13-6 361196-15-8 361196-16-9
361196-17-0 361196-19-2 361375-65-7
361375-66-8
RL: DEV (Device component use); USES (Uses)
(electroluminescent device elements)

RN 361196-13-6 CAPLUS

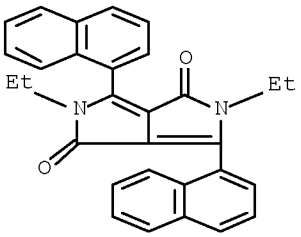
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)



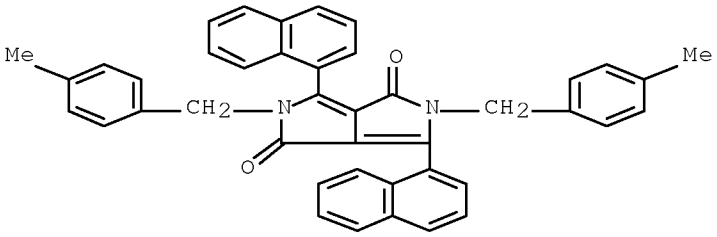
RN 361196-15-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-di-1-naphthalenyl-2,5-bis(1-naphthalenylmethyl)- (CA INDEX NAME)



RN 361196-16-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-1-naphthalenyl- (CA INDEX NAME)

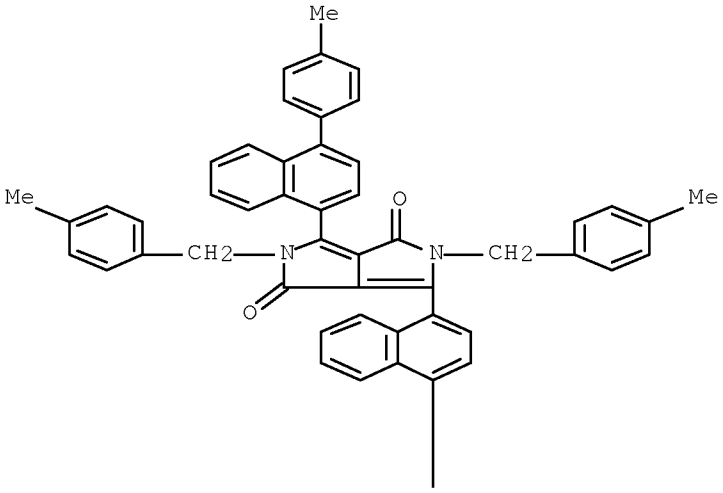


RN 361196-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



RN 361196-19-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[(4-methylphenyl)methyl]-3,6-bis[4-(4-methylphenyl)-1-naphthalenyl]- (CA INDEX NAME)

PAGE 1-A



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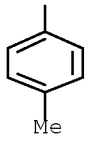
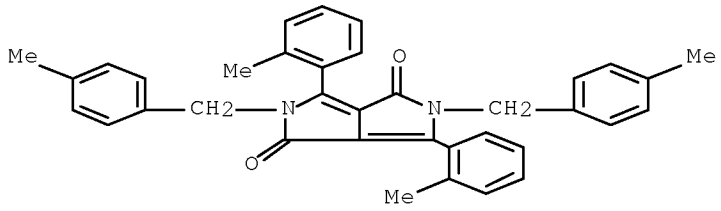
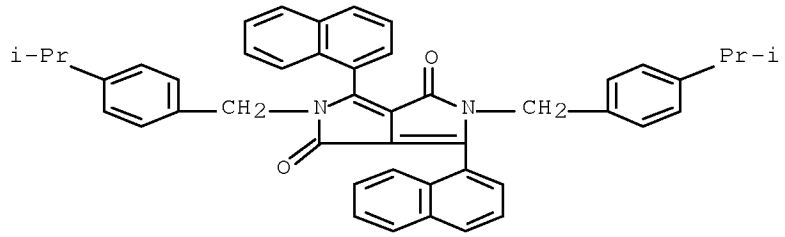


RN 361375-65-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(2-methylphenyl)-2,5-bis[(4-methylphenyl)methyl]- (CA INDEX NAME)



RN 361375-66-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis[[4-(1-methylethyl)phenyl]methyl]-3,6-di-1-naphthalenyl- (CA INDEX NAME)



L62 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:543127 CAPLUS Full-text
DOCUMENT NUMBER: 129:181896
TITLE: Process for the preparation of fluorescent compositions, fluorescent compositions and their use
INVENTOR(S): Deno, Takashi; Kodama, Kunihiko; Iqbal, Abdul; Devlin, Brian Gerrard
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9833863	A1	19980806	WO 1998-EP315	19980121 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9860958	A	19980825	AU 1998-60958	19980121 <--
AU 735326	B2	20010705		
EP 963424	A1	19991215	EP 1998-905327	19980121 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
JP 2001509830	T	20010724	JP 1998-532505	19980121 <--
PRIORITY APPLN. INFO.:			EP 1997-810049 A	19970203 <--

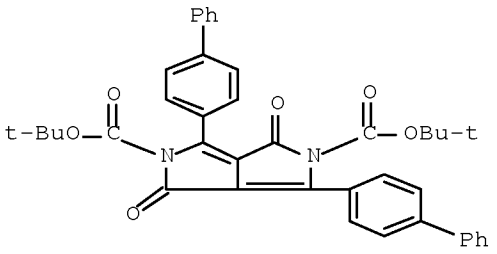
EP 1997-810050	A	19970203	<--
EP 1997-810051	A	19970203	<--
EP 1997-810054	A	19970204	<--
EP 1997-810055	A	19970204	<--
WO 1998-EP315	W	19980121	<--

AB Methods for preparing a solid fluorescent composition entail: mixing a host chromophore and an effective amount of a pigment precursor in a solvent, then generating a pigment as guest chromophore in situ from the pigment precursor, and, subsequently, isolating the mixture of the host and guest chromophores, thereby forming a solid solution; or mixing a polymer as a matrix or a polymer precursor and a pigment precursor in a solvent, if desired in the presence of a chromophore being a host component, then generating a pigment in situ from the pigment precursor (being the guest component if a host component is present), and subsequently isolating the mixture of polymer and pigment, and, if present, the host component, thereby forming a solid solution, wherein in all cases where there is a host component, the absorption spectrum of the pigment (guest chromophore) overlaps with the fluorescence emission spectrum of the host chromophore. The compns. and their use as fluorescent materials and as electroluminescent materials, and electroluminescent devices using the materials, are also described.

IT 167093-40-5
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(guest-host fluorescent composition preparation and the fluorescent compns. and
their use)

RN 167093-40-5 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:527379 CAPLUS Full-text

DOCUMENT NUMBER: 129:176908

TITLE: Soluble chromophores having improved solubilizing groups and their use

INVENTOR(S): Hall-Goulle, Veronique; Bize, Aline

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9832802	A1	19980730	WO 1998-EP248	19980117 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2275965	A1	19980730	CA 1998-2275965	19980117 <--
AU 9862109	A	19980818	AU 1998-62109	19980117 <--
EP 968250	A1	20000105	EP 1998-904092	19980117 <--
EP 968250	B1	20010418		
R: CH, DE, FR, GB, IT, LI				
JP 2001513119	T	20010828	JP 1998-531549	19980117 <--
TW 444051	B	20010701	TW 1998-87100901	19980123 <--
US 6274728	B1	20010814	US 1999-465868	19991216 <--
PRIORITY APPLN. INFO.:			CH 1997-171 A	19970127 <--
			WO 1998-EP248 W	19980117 <--
			US 1998-13659 B1	19980226 <--

OTHER SOURCE(S): MARPAT 129:176908

AB The colorants A(B)x (x = 1-8; A = radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series; B = H or solubilizing group) are obtained whereby A is bonded to x groups B via one or more hetero atoms, those hetero atoms being selected from the group consisting of N, O, and S and forming part of the radical A. The colorants are used in high-mol.-weight organic materials, thermo-, photo-, or chemo-sensitive recording materials, light-sensitive neg. or pos. resist compns., ink compns. for ink-jet printing, and color tapes for thermal transfer printing. The soluble chromophore derivs. can be converted to the underivatized form (B = H) by heating after they are incorporated into a substrate. Thus, bis(1,1-dimethyl-3,7-dioxa-1-heptyl) oxydicarbonate was prepared and used to treat C.I. Pigment Violet 37, giving the red tetrakis(1,1,-dimethyl-3,7- dioxa-1-heptyloxycarbonyl) derivative of C.I. Pigment Violet 37 in 65% yield; this pigment was used in a coating composition

IT 211321-88-9P

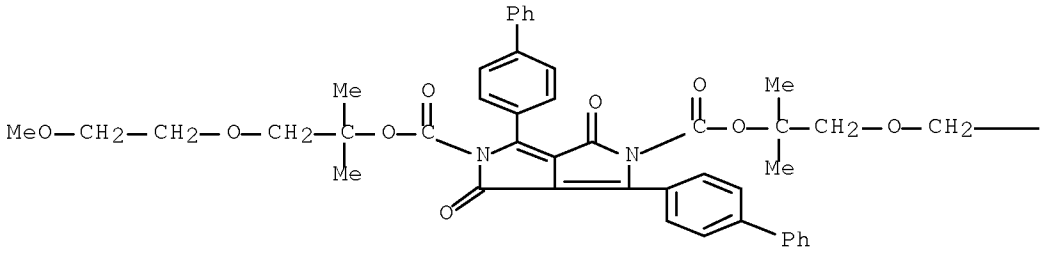
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(orange-brown pigment; preparation of pigments containing labile solubilizing groups)

RN 211321-88-9 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis[2-(2-methoxyethoxy)-1,1-dimethylethyl] ester (9CI) (CA INDEX NAME)

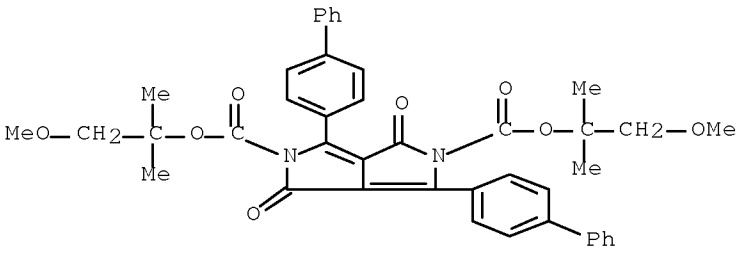
PAGE 1-A



PAGE 1-B

—CH2—OMe

IT 211321-91-4P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pigment; preparation of pigments containing labile solubilizing groups)
RN 211321-91-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis(2-methoxy-1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



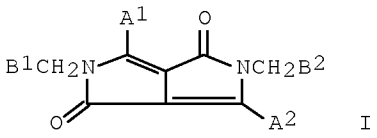
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:181803 CAPLUS Full-text
Correction of: 1997:801926
DOCUMENT NUMBER: 128:181675
Correction of: 128:76655
TITLE: Diketopyrrolopyrrole derivatives and manufacture thereof, manufacture of coating materials containing the same, and reducing pigmented organic polymer solutions viscosity by using the same
INVENTOR(S): Hendi, Shivakumar Basalingappa
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
EP 811625	A2	19971210	EP 1997-810324		19970527	<--
EP 811625	A3	19980408				
EP 811625	B1	20020417				
R: CH, DE, ES, FR, GB, IT, LI, NL						
CA 2206756	A1	19971205	CA 1997-2206756		19970603	<--
CN 1171402	A	19980128	CN 1997-112961		19970604	<--
CN 1067395	B	20010620				
JP 10081687	A	19980331	JP 1997-147565		19970605	<--
BR 9703467	A	19981006	BR 1997-3467		19970605	<--
PRIORITY APPLN. INFO.:			US 1996-19138P	P	19960605	<--
			US 1996-27469P	P	19960926	<--
			US 1996-27470P	P	19960926	<--

OTHER SOURCE(S): MARPAT 128:181675
GI



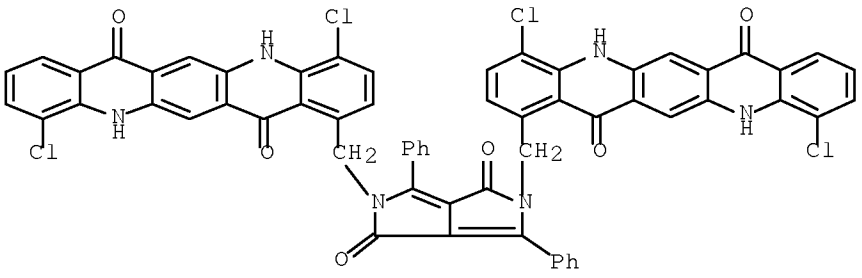
I

AB The title compds. are I [A1, A2 = aryl; B1, B2 = organic group] prepared from I (B1, B2 = OH) with or without isolation. 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole, quinacridone, and paraformaldehyde in concentrated sulfuric acid gave I (A1 = A2 = Ph; Q = quinacridinyl).

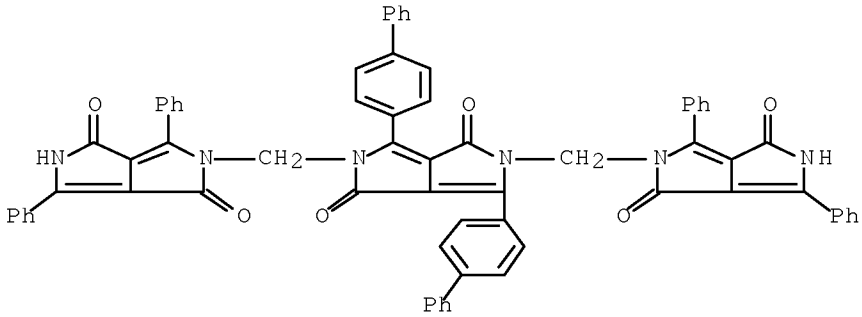
IT 200356-68-9P 200356-71-4P 200356-72-5P
200356-75-8P 200356-76-9P 200356-77-0P
200356-78-1P 200356-79-2P 200702-90-5P
200702-91-6P 200702-92-7P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(diketopyrrolopyrrole derivs. and manufacture thereof, manufacture of coating
materials containing the same, and reducing pigmented organic polymer solns.
viscosity by using the same)

RN 200356-68-9 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(4,11-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-diphenyl- (9CI) (CA INDEX NAME)

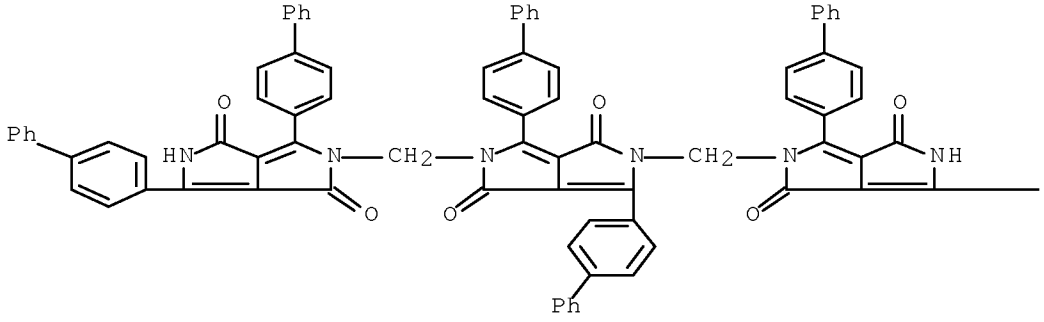


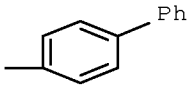
RN 200356-71-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[(4,5-dihydro-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrol-2(1H)-yl)methyl]-2,5-dihydro- (CA INDEX NAME)



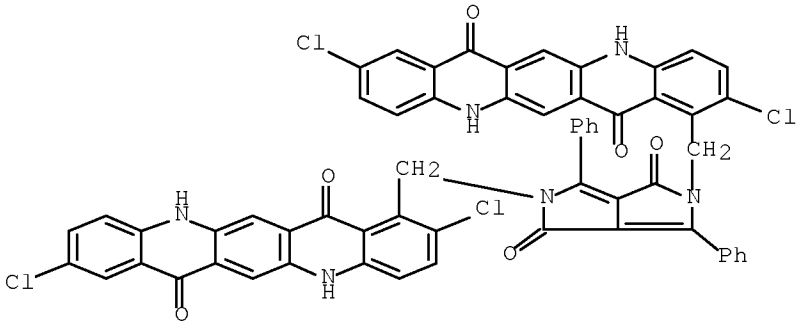
RN 200356-72-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis([1,1'-biphenyl]-4-yl)-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (CA INDEX NAME)

PAGE 1-A

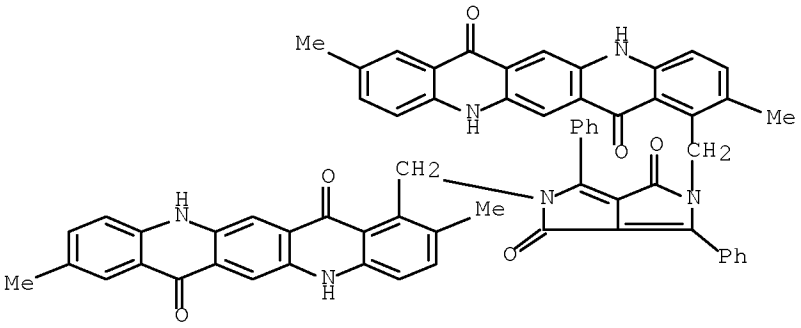




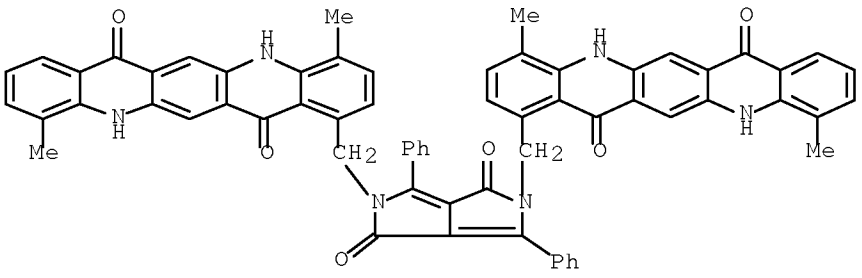
RN 200356-75-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-diphenyl- (9CI) (CA INDEX NAME)



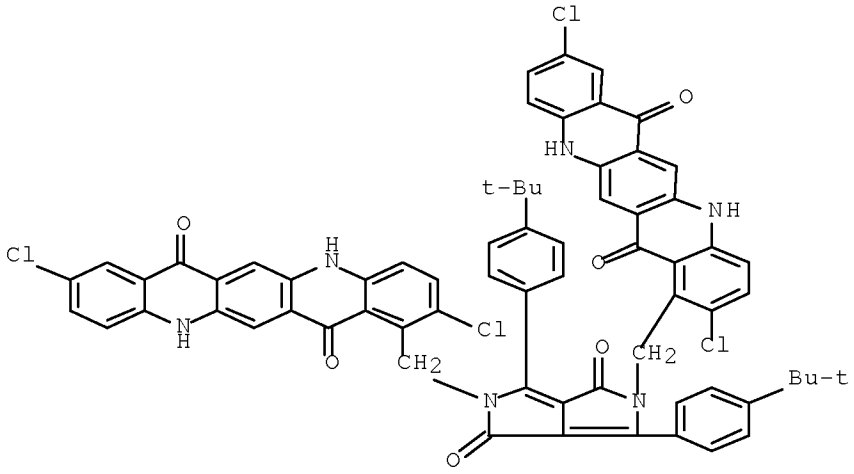
RN 200356-76-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis[(5,7,12,14-tetrahydro-2,9-dimethyl-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]- (9CI) (CA INDEX NAME)



RN 200356-77-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis[(5,7,12,14-tetrahydro-4,11-dimethyl-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]- (9CI) (CA INDEX NAME)

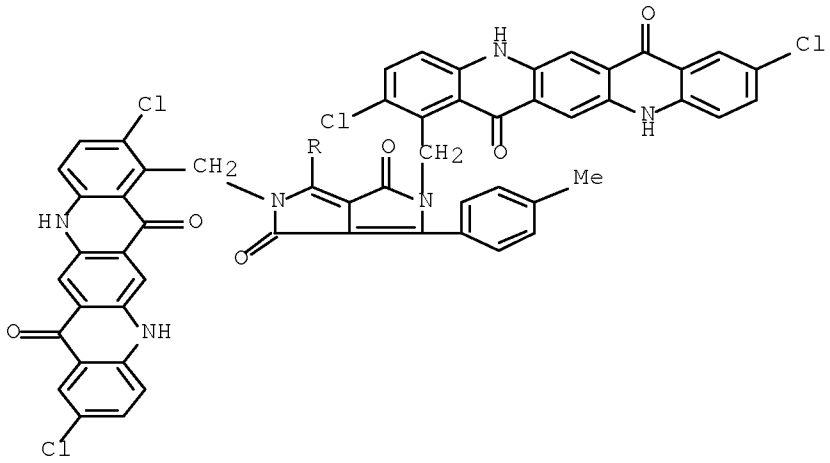


RN 200356-78-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 200356-79-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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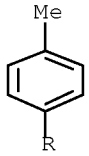
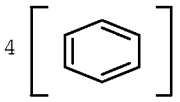


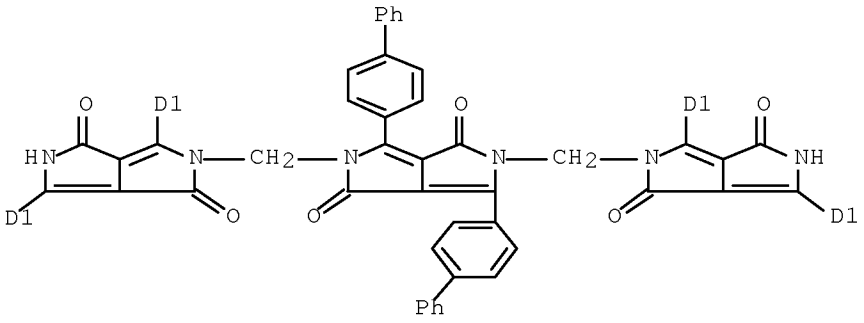
RN 200702-90-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis(chlorophenyl)-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A



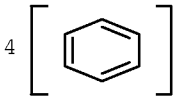
4 (D1—Cl)

PAGE 2-A



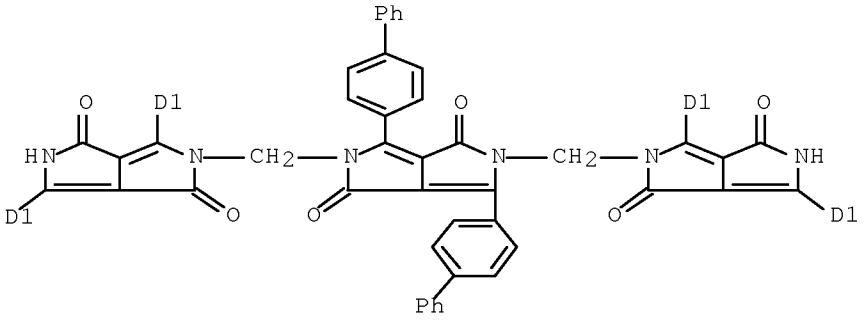
RN 200702-91-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[4,5-dihydro-3,6-bis(methylphenyl)-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A



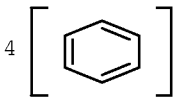
4 (D1— Me)

PAGE 2-A



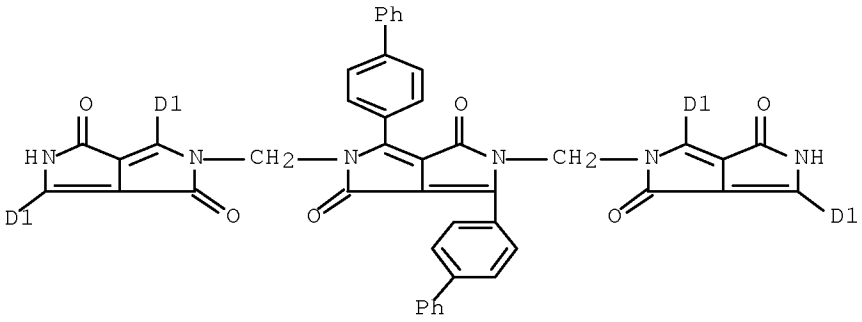
RN 200702-92-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis[(1,1-dimethylethyl)phenyl]-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A

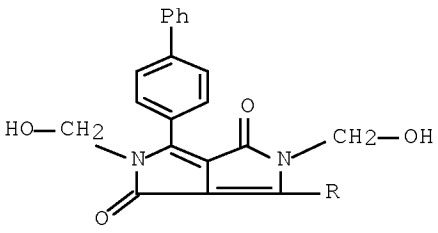


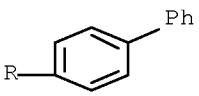
4 (D1—Bu-t)

PAGE 2-A



IT 200356-67-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(diketopyrrolopyrrole derivs. and manufacture thereof, manufacture of coating
materials containing the same, and reducing pigmented organic polymer solns.
viscosity by using the same)
RN 200356-67-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(hydroxymethyl)- (CA INDEX NAME)



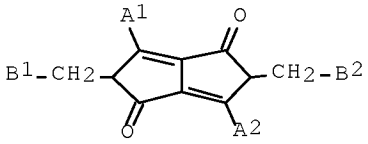


L62 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:801926 CAPLUS Full-text
DOCUMENT NUMBER: 128:76655
TITLE: Diketopyrrolopyrrole derivatives and manufacture thereof, manufacture of coating materials containing the same, and reducing pigmented organic polymer solutions viscosity by using the same
INVENTOR(S): Hendi, Shivakumar Basalingappa
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT INFORMATION:

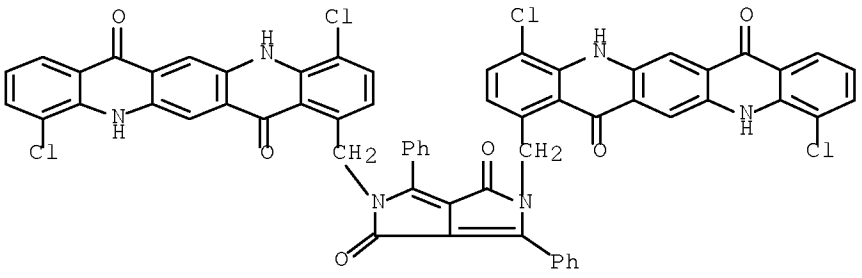
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 811625 A2		19971210	EP 1997-810324	19970527
R: CH, DE, ES, FR, GB, IT, LI, NL				

PRIORITY APPLN. INFO.: US 1996-19138 19960605
US 1996-27469 19960926
US 1996-27470 19960926
OTHER SOURCE(S): MARPAT 128:76655
GI

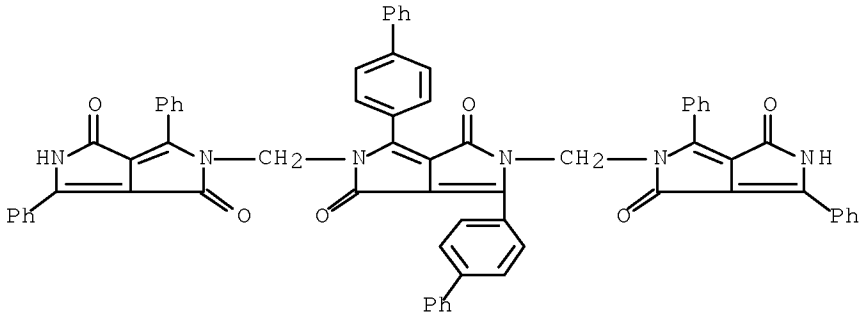


I

AB The title compds. are I [A1, A2 = aryl; B1, B2 = organic group] prepared from I (B1, B2 = OH) with or without isolation. 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole, quinacridone, and paraformaldehyde in concentrated sulfuric acid gave I (A1 = A2 = Ph; Q = quinacridinyl).
IT 200356-68-9P 200356-71-4P 200356-72-5P
200356-75-8P 200356-76-9P 200356-77-0P
200356-78-1P 200356-79-2P 200702-90-5P
200702-91-6P 200702-92-7P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(diketopyrrolopyrrole derivs. and manufacture thereof, manufacture of coating
materials containing same, and reducing pigmented organic polymer solns. viscosity by using the same)
RN 200356-68-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(4,11-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-diphenyl- (9CI) (CA INDEX NAME)



RN 200356-71-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[(4,5-dihydro-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrol-2(1H)-yl)methyl]-2,5-dihydro- (CA INDEX NAME)



RN 200356-72-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis([1,1'-biphenyl]-4-yl)-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (CA INDEX NAME)

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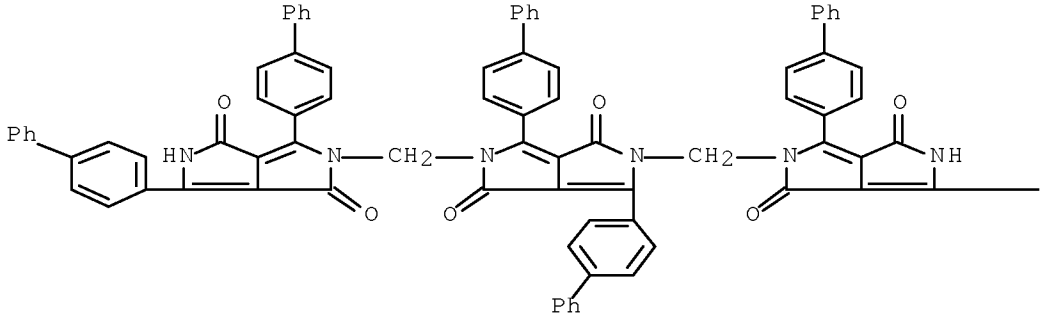
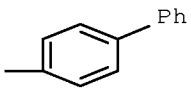
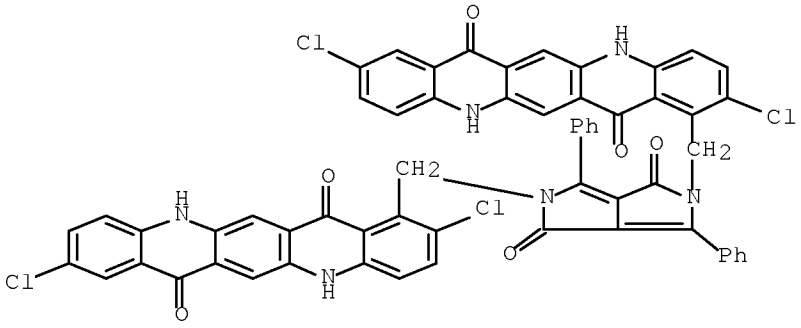
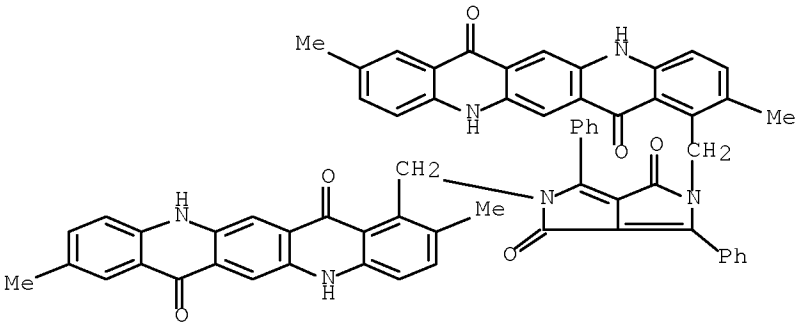




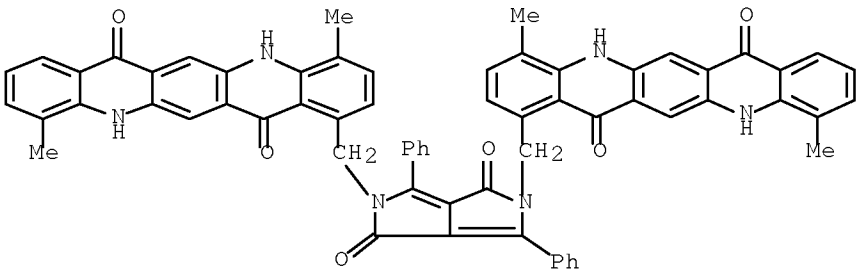
RN 200356-75-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-diphenyl- (9CI) (CA INDEX NAME)



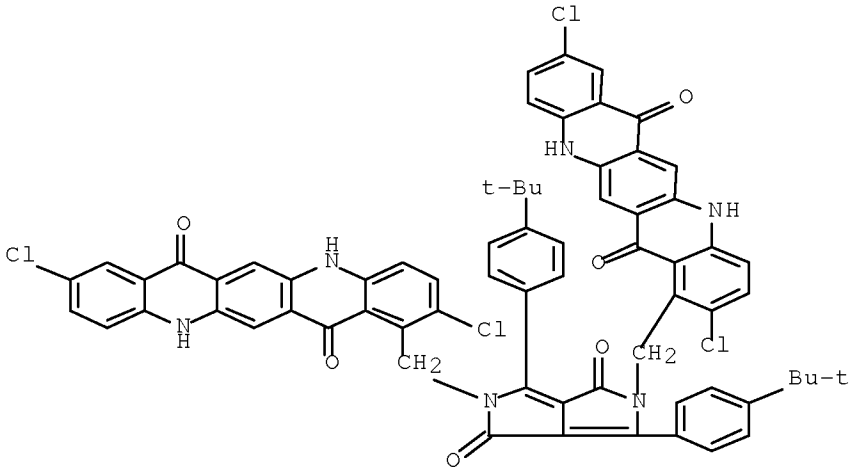
RN 200356-76-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis[(5,7,12,14-tetrahydro-2,9-dimethyl-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]- (9CI) (CA INDEX NAME)



RN 200356-77-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis[(5,7,12,14-tetrahydro-4,11-dimethyl-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]- (9CI) (CA INDEX NAME)



RN 200356-78-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 200356-79-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(2,9-dichloro-5,7,12,14-tetrahydro-7,14-dioxoquino[2,3-b]acridin-1-yl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

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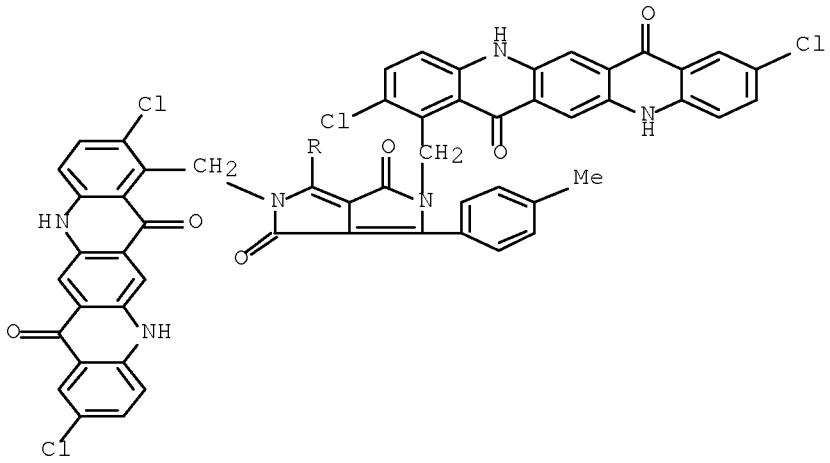
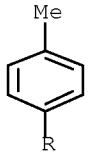


PAGE 2-A



RN 200702-90-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis(chlorophenyl)-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

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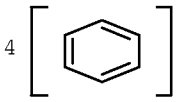
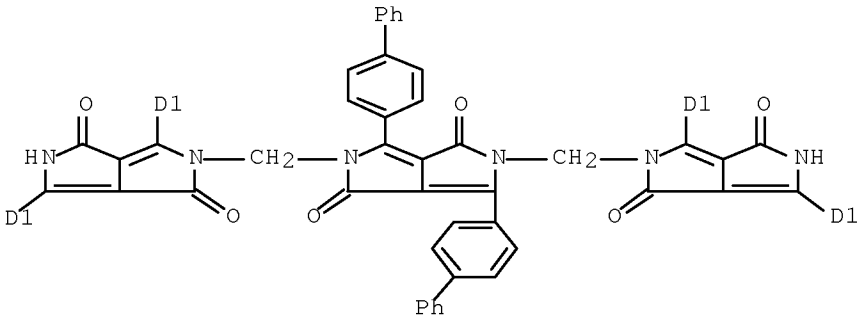


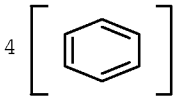
4 (D1—Cl)

PAGE 2-A



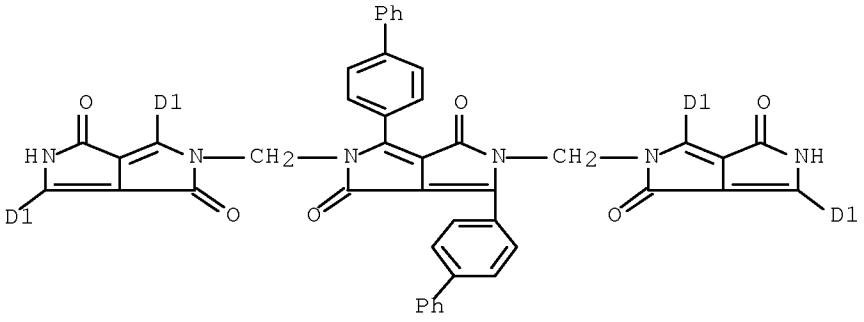
RN 200702-91-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[4,5-dihydro-3,6-bis(methylphenyl)-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

PAGE 1-A



4 (D1— Me)

PAGE 2-A



RN 200702-92-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-bis[[3,6-bis[(1,1-dimethylethyl)phenyl]-4,5-dihydro-1,4-dioxopyrrolo[3,4-c]pyrrol-2(1H)-yl]methyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

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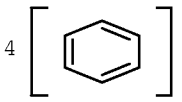
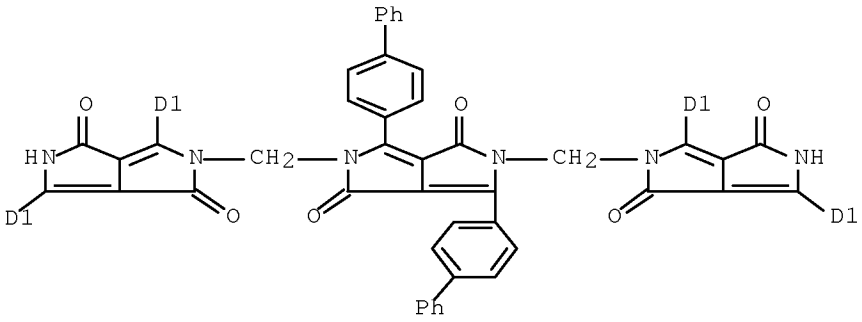
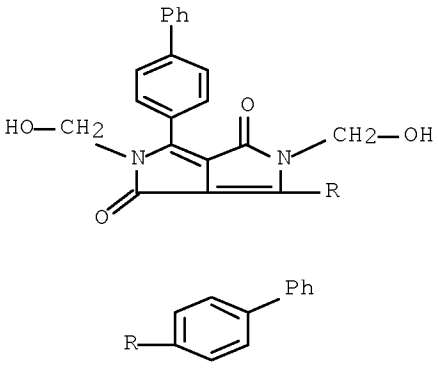


4 (D1—Bu-t)

PAGE 2-A



IT 200356-67-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(diketopyrrolopyrrole derivs. and manufacture thereof, manufacture of coating
materials containing same, and reducing pigmented organic polymer solns. viscosity by using the same)
RN 200356-67-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-bis(hydroxymethyl)- (CA INDEX NAME)

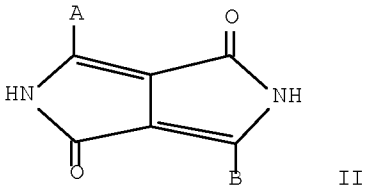


L62 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:307656 CAPLUS Full-text

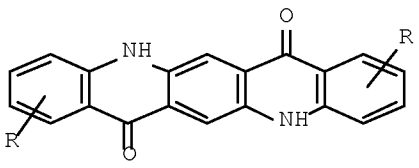
DOCUMENT NUMBER: 126:278956
TITLE: Solid solutions of 1,4-diketopyrrolopyrroles and polymers containing them
INVENTOR(S): Hao, Zhimin; Wallquist, Olof
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 763572	A2	19970319	EP 1996-810600	19960910 <--
EP 763572	A3	19980401		
EP 763572	B1	20020410		
R: CH, DE, FR, GB, LI				
US 5821373	A	19981013	US 1996-712722	19960912 <--
CA 2185618	A1	19970319	CA 1996-2185618	19960916 <--
CN 1158873	A	19970910	CN 1996-122501	19960917 <--
CN 1076369	B	20011219		
JP 09132575	A	19970520	JP 1996-245802	19960918 <--
PRIORITY APPLN. INFO.:			CH 1995-2630 A	19950918 <--

OTHER SOURCE(S): MARPAT 126:278956
GI



II

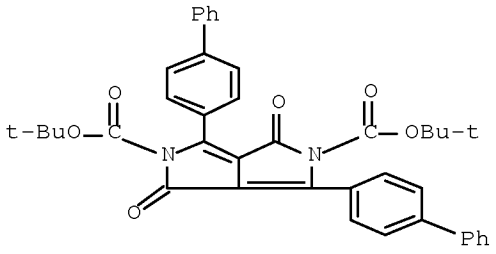


III

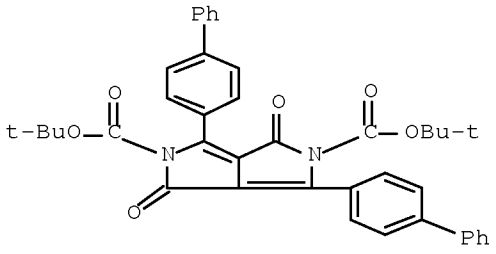
AB Solid solns. of 3,6-bis(4-biphenylyl)-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (I) with II (A, B = aromatic or heterocyclic group) or III (R = H, halogen, alkyl, alkoxy) in a (20-90):(10-80) ratio have good pigment properties and dispersibility in plastics and coatings. In an example, a 1:4 solid solution obtained from I and II (A = B = Ph), with both compds. being initially mixed in the form of their N,N-bis(tert-butoxycarbonyl) derivs. for enhanced solubility, was used in a red sprayable and bakeable topcoat composition

IT 167093-40-5DP, solid solns. with 1,4-diketopyrrolopyrroles
167093-40-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(solid solns. of 1,4-diketopyrrolopyrrole pigments)
RN 167093-40-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 167093-40-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



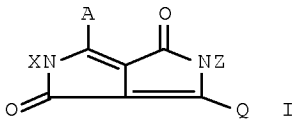
L62 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:763565 CAPLUS Full-text
DOCUMENT NUMBER: 123:146701
TITLE: 1,4-diketopyrrolo[3,4-c]pyrroles, their preparation and their use
INVENTOR(S): Zambounis, John; Hao, Zhimin; Iqbal, Abul
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 648770	A2	19950419	EP 1994-810580	19941004 <--
EP 648770	A3	19950531		
EP 648770	B1	20000517		
R: BE, CH, DE, FR, GB, IT, LI, NL				
US 5484943	A	19960116	US 1994-319406	19941006 <--
CA 2117865	A1	19950414	CA 1994-2117865	19941011 <--

JP 07188234	A	19950725	JP 1994-246632	19941013	<--
JP 3596915	B2	20041202			
EP 690057	A1	19960103	EP 1995-810412	19950620	<--
EP 690057	B1	19990908			
R: CH, DE, FR, GB, IT, LI					
EP 690058	A1	19960103	EP 1995-810413	19950620	<--
EP 690058	B1	19990908			
R: CH, DE, FR, GB, IT, LI					
EP 690059	A1	19960103	EP 1995-810414	19950620	<--
EP 690059	B1	19990908			
R: CH, DE, FR, GB, IT, LI					
US 5591865	A	19970107	US 1995-493853	19950622	<--
US 5646299	A	19970708	US 1995-493776	19950622	<--
US 5650520	A	19970722	US 1995-493516	19950622	<--
CA 2152744	A1	19951230	CA 1995-2152744	19950627	<--
CA 2152745	A1	19951230	CA 1995-2152745	19950627	<--
CA 2152748	A1	19951230	CA 1995-2152748	19950627	<--
JP 08020731	A	19960123	JP 1995-163153	19950629	<--
JP 3637105	B2	20050413			
JP 08027391	A	19960130	JP 1995-163151	19950629	<--
JP 3645314	B2	20050511			
JP 08048908	A	19960220	JP 1995-163152	19950629	<--
JP 3645315	B2	20050511			
US 5616725	A	19970401	US 1995-541004	19951011	<--
PRIORITY APPLN. INFO.:			CH 1993-3079	A 19931013	<--
			CH 1994-2074	A 19940629	<--
			CH 1994-2075	A 19940629	<--
			CH 1994-2076	A 19940629	<--
			US 1994-319406	A3 19941006	<--

OTHER SOURCE(S): MARPAT 123:146701

GI



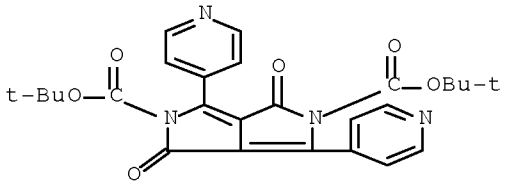
I

AB The pyrrolopyrrolediones (I; A, Q = aromatic group; X = H, RO2C; Z = CO2R, where R = organic group) are obtained for use as UV-fluorescent pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole was treated with di-tert-Bu carbonate to give I (A = Q = Ph; X = Z= tert-butoxycarbonyl).

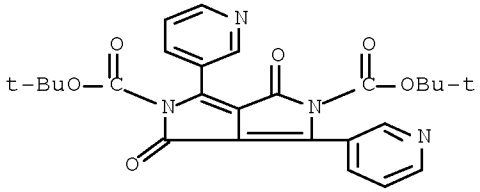
IT 167093-37-0P 167093-38-1P 167093-39-2P
167093-40-5P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of diketopyrrolopyrrole fluorescent pigments)

RN 167093-37-0 CAPLUS

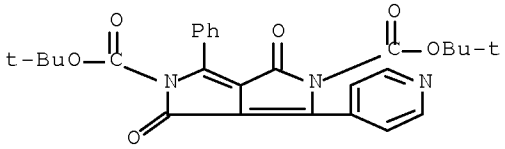
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 1,4-dioxo-3,6-di-4-pyridinyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



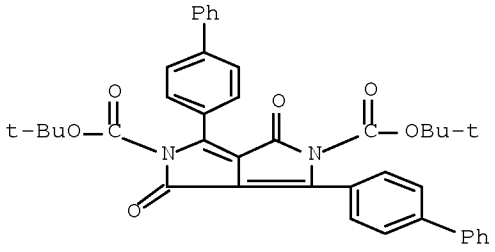
RN 167093-38-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 1,4-dioxo-3,6-di-3-pyridinyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 167093-39-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 1,4-dioxo-3-phenyl-6-(4-pyridinyl)-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 167093-40-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-2,5(1H,4H)-dicarboxylic acid, 3,6-bis([1,1'-biphenyl]-4-yl)-1,4-dioxo-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

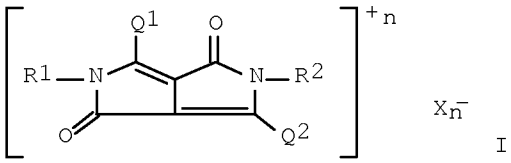


L62 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:667261 CAPLUS Full-text
DOCUMENT NUMBER: 123:83351

TITLE: Preparation of electrochromic diketopyrroles for electrochromic display devices
INVENTOR(S): Mizuguchi, Jin; Iqbal, Abul; Giller, Gerald
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4435211	A1	19950427	DE 1994-4435211	19940930 <--
PRIORITY APPLN. INFO.:			CH 1993-2978 A	19931004 <--

OTHER SOURCE(S): MARPAT 123:83351
GI



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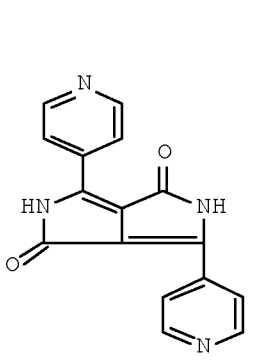

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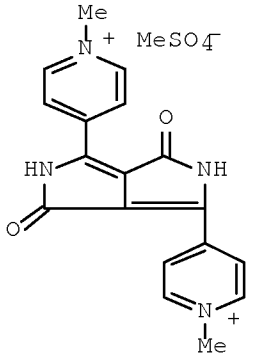


III

AB The title compds. [I; Q1 = (un)substituted quaternary N-heteroarom.-bound hydrocarbon; Q2 = Q1, (un)substituted aryl; R1, R2 = H, alkyl, haloalkyl, cycloalkyl, (un)substituted Ph, (un)substituted PhCH2, etc.; X = mono-basic acid anion; n = 1, 2], useful in electrochromic display devices, are prepared Thus, diketopyrrole, II, was reacted with di-Me sulfate, producing an electrochromic salt, III, which, in an electrochromic display device with K4Fe(CN)6 and Na hypophosphite at 1.5V for 1 s, demonstrated a contrast ratio (560 nm) of 8 and a useable lifetime without contrast reduction of >1000 cycles.

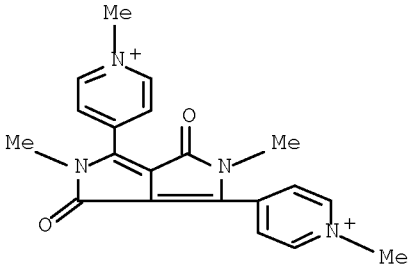
IT 164790-20-9P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of electrochromic diketopyrroles for electrochromic display devices)

RN 164790-20-9 CAPLUS

CN Pyridinium, 4,4'-(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis[1-methyl-, bis(methyl sulfate) (9CI) (CA INDEX NAME)

CM 1

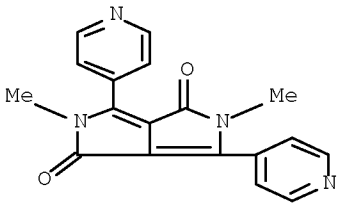
CRN 164790-19-6
CMF C20 H20 N4 O2



CM 2

CRN 21228-90-0
CMF C H3 O4 S

IT 164790-22-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of electrochromic diketopyrroles for electrochromic display devices from)
RN 164790-22-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-4-pyridinyl- (CA INDEX NAME)



L62 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:468456 CAPLUS Full-text
DOCUMENT NUMBER: 113:68456
TITLE: Optical memory devices containing color changeable dyes, and dyes therefor
INVENTOR(S): Langhals, Heinz; Potrawa, Thomas

PATENT ASSIGNEE(S): Riedel-de Haen A.-G., Germany
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9001480	A1	19900222	WO 1989-EP866	19890724 <--
W: JP, US				
RW: CH, DE, FR, GB, NL				
DE 3901988	A1	19900201	DE 1989-3901988	19890124 <--
DE 3908312	A1	19900927	DE 1989-3908312	19890314 <--
EP 426717	A1	19910515	EP 1989-908407	19890724 <--
EP 426717	B1	19960424		
R: CH, DE, FR, GB, LI, NL				
JP 04500935	T	19920220	JP 1989-507776	19890724 <--
US 5354869	A	19941011	US 1991-640367	19910129 <--

PRIORITY APPLN. INFO.:

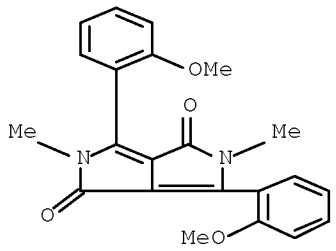
DE 1988-3825943	A	19880729 <--
DE 1989-3901988	A	19890124 <--
DE 1989-3908312	A	19890314 <--
DE 1988-3808312	A	19890314 <--
WO 1989-EP866	W	19890724 <--

OTHER SOURCE(S): MARPAT 113:68456

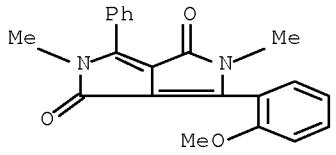
AB The dyes with ≥2 different color forms, one of which can be changed to the other by supplying energy, are described which are used as storage media in optical memories. The dyes are solid state fluorescent dyes. Thus, 3,6-bis(2'-methoxyphenyl)-2,5-dihydropyrrolo(3,4-c)pyrrole-1,4-dione was prepared

IT 119273-55-1P 128318-47-8P 128318-48-9P
128318-50-3P 128318-51-4P 128318-52-5P
128318-54-7P 128318-55-8P
RL: PREP (Preparation)
(preparation of, as color changeable dye in optical memory device)

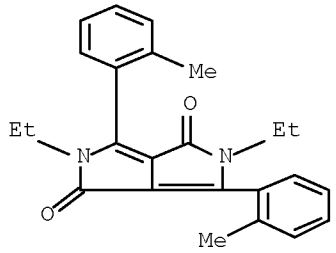
RN 119273-55-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(2-methoxyphenyl)-2,5-dimethyl- (CA INDEX NAME)



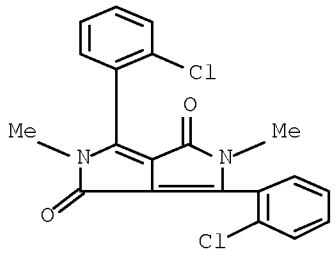
RN 128318-47-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(2-methoxyphenyl)-2,5-dimethyl-6-phenyl- (CA INDEX NAME)



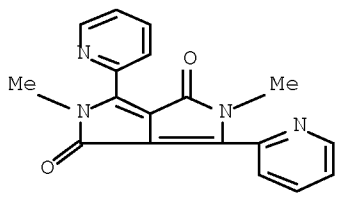
RN 128318-48-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis(2-methylphenyl)- (CA INDEX NAME)



RN 128318-50-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(2-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

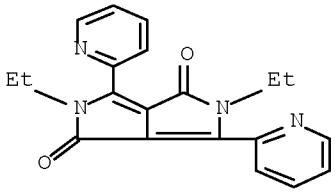


RN 128318-51-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-di-2-pyridinyl- (CA INDEX NAME)

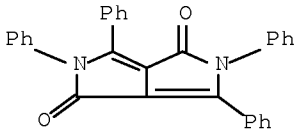


RN 128318-52-5 CAPLUS

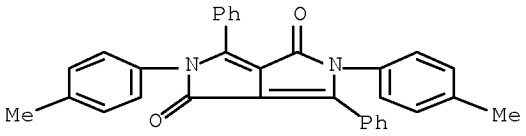
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-di-2-pyridinyl- (CA INDEX NAME)



RN 128318-54-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,3,5,6-tetraphenyl- (CA INDEX NAME)



RN 128318-55-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis(4-methylphenyl)-3,6-diphenyl- (CA INDEX NAME)



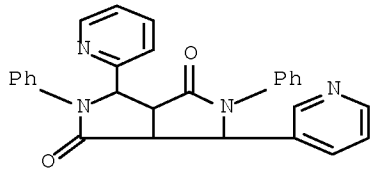
L62 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1976:105354 CAPLUS Full-text
DOCUMENT NUMBER: 84:105354
ORIGINAL REFERENCE NO.: 84:17151a,17154a
TITLE: Addition products of 2-(N-arylformimidoyl)pyridines and carbanions, and their reduction to octahydroindolizine derivatives
AUTHOR(S): Sprake, John M.; Watson, Keith D.
CORPORATE SOURCE: Sch. Pharm., Sunderland Polytech., Sunderland, UK
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1976), (1), 5-8
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 84:105354
GI For diagram(s), see printed CA Issue.

AB Addnl. data considered in abstracting and indexing are available from a source cited in the original document. The pyridine derivs. I (R = H, Me, OMe, Cl) underwent addition reactions with R1CH2COR2 (II; R1 = Ph, R2 = OEt) to give 64-78% adducts III, reduction of which gave 48-62% indolizines IV (R = H, Me, OMe, H, resp.). I (R = H) also underwent addition reactions with II (R1 = CO2Et, MeCO, PhCO, R2 = OEt; R1 = MeCO, R2 = Me) to give 55-70% adducts III, which also underwent reduction Thus, hydrogenation of III (R = H, R1 = PhCO, R2 = OEt) gave 61% Et octahydro-3-phenylindolizine-2- carboxylate, which was also prepared (71%) by catalytic reduction of Et 3-oxo-3-phenyl-2-(2-pyridylmethylene)propionate. Two mols. of I (R = H) underwent cyclocondensation with (EtO2CCH2)2 to give 93% pyrrolopyrrole V.

IT 58971-02-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 58971-02-1 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, hexahydro-2,5-diphenyl-3-(2-pyridinyl)-6-(3-pyridinyl)- (CA INDEX NAME)



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DICTIONARY FILE UPDATES:   4 FEB 2008  HIGHEST RN 1001463-85-9

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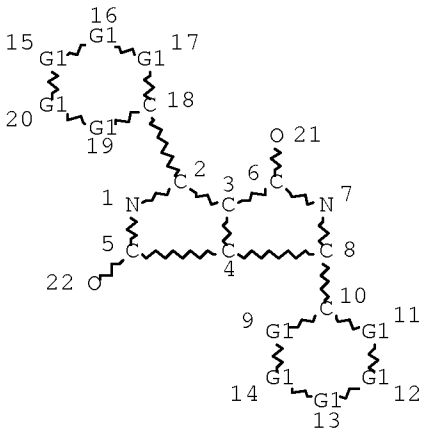


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CONNECT IS M1  C  AT   7
CONNECT IS E1  RC AT  21
CONNECT IS E1  RC AT  22
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 22

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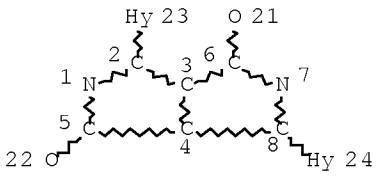

NODE ATTRIBUTES:
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CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
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ECOUNT IS M1 N AT 23
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NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
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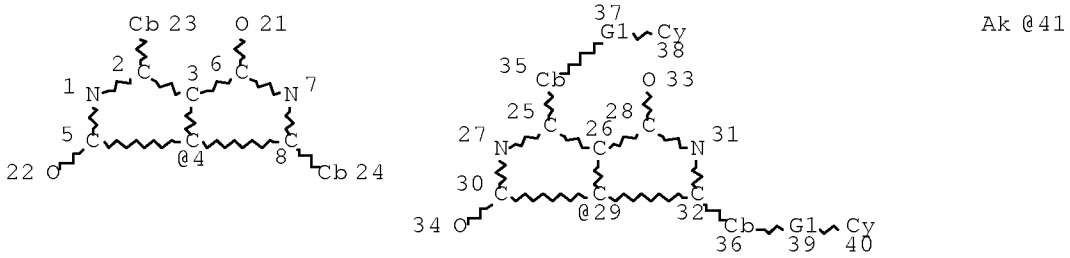

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CONNECT IS E1 RC AT 21
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CONNECT IS M1 C AT 27
CONNECT IS M1 C AT 31
CONNECT IS E1 RC AT 33
CONNECT IS E1 RC AT 34
CONNECT IS E2 RC AT 41

DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 23
GGCAT IS PCY UNS AT 24
GGCAT IS MCY UNS AT 35
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DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M10 C AT 23
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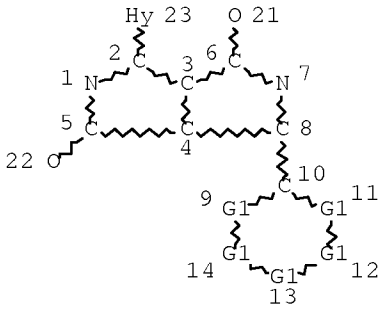

VAR G1=N/C
NODE ATTRIBUTES:
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CONNECT IS M1 C AT 7
CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 23

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
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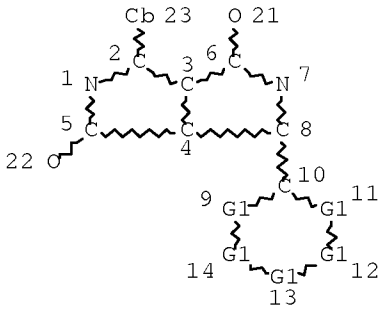

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NODE ATTRIBUTES:
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CONNECT IS M1 C AT 7
CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 23
DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 17

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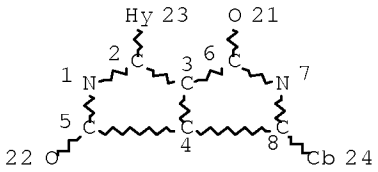

NODE ATTRIBUTES:
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CONNECT IS M1 C AT 7
CONNECT IS E1 RC AT 21
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DEFAULT MLEVEL IS ATOM
GGCAT IS PCY AT 24
DEFAULT ECLEVEL IS LIMITED
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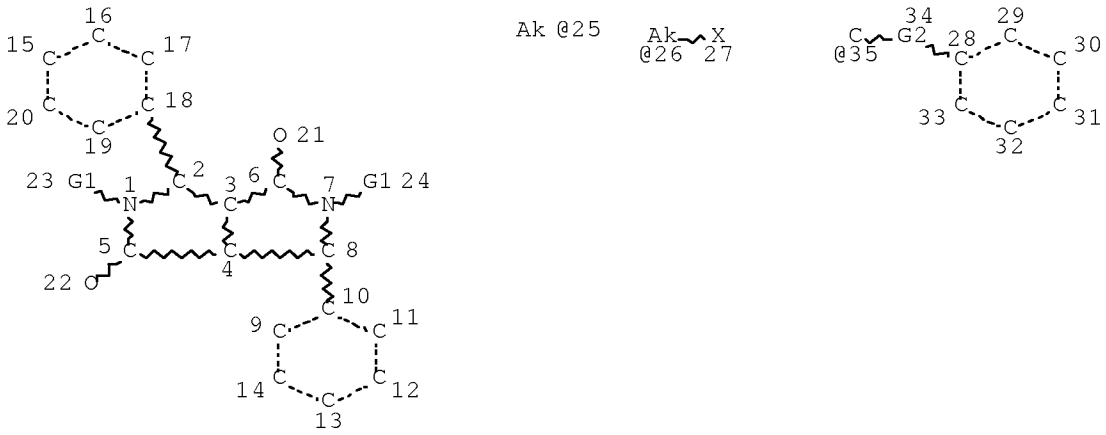

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC  15  10
NUMBER OF NODES IS  35

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED     468 ITERATIONS                          373 ANSWERS
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L2          693 SEA FILE=REGISTRY SSS FUL L1
L4              STR
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L64         20 L63 AND L33    DATE LIMITED

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L64  ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2003:403612  CAPLUS  Full-text
DOCUMENT NUMBER:          139:14696
TITLE:                    Fluorescent diketopyrrolopyrrole compound and
                          electroluminescent device
INVENTOR(S):              Suda, Yasumasa; Yauchi, Hiroyuki; Kurata, Ryuichiro
PATENT ASSIGNEE(S):       Toyo Ink Mfg. Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 25 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     JP 2003155286         A     20030527    JP 2001-352573          20011119 <--
PRIORITY APPLN. INFO.:                       JP 2001-352573          20011119 <--
OTHER SOURCE(S):          MARPAT 139:14696
GI
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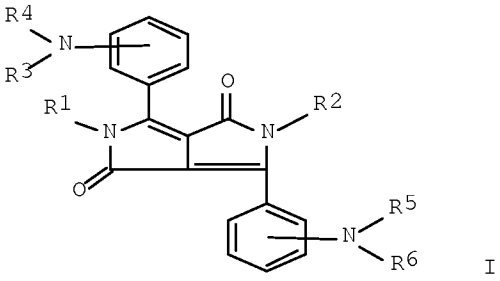


I

```
AB    The invention refers to a fluorescent compound I, suitable for use in
      electroluminescent devices, [R1-6 = (un)substituted alkyl, aryl or
      heterocycle].  Reg.
IC    ICM  C07D487-04
      ICS  C09B057-00; C09K011-06; H05B033-14
CC    73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
      Properties)
IT    Electroluminescent devices
        Fluorescent substances
```

(fluorescent diketopyrrolopyrrole compound and electroluminescent device)

IT 532952-65-1 532952-66-2 532952-67-3
532952-68-4 532952-70-8
RL: DEV (Device component use); USES (Uses)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)

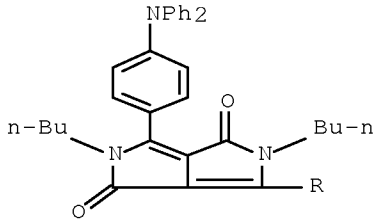
IT 532952-64-0P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)

IT 532952-72-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)

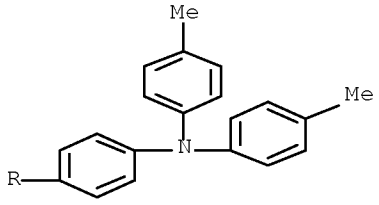
IT 532952-65-1 532952-66-2 532952-67-3
532952-68-4 532952-70-8
RL: DEV (Device component use); USES (Uses)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)

RN 532952-65-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dibutyl-6-[4-(diphenylamino)phenyl]-2,5-dihydro- (CA INDEX NAME)

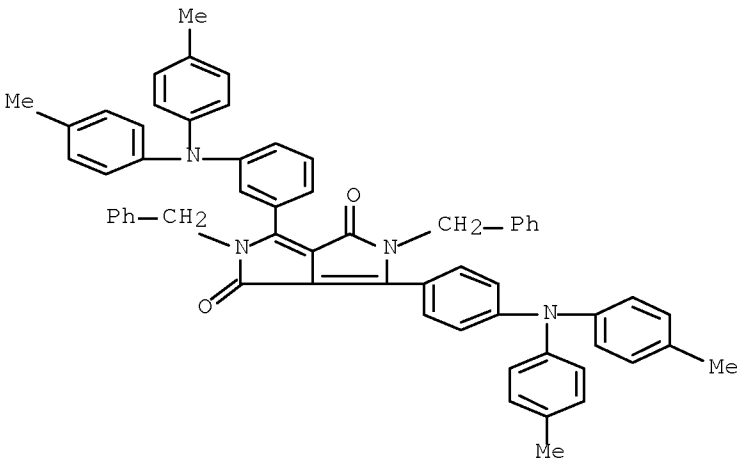
PAGE 1-A



PAGE 2-A

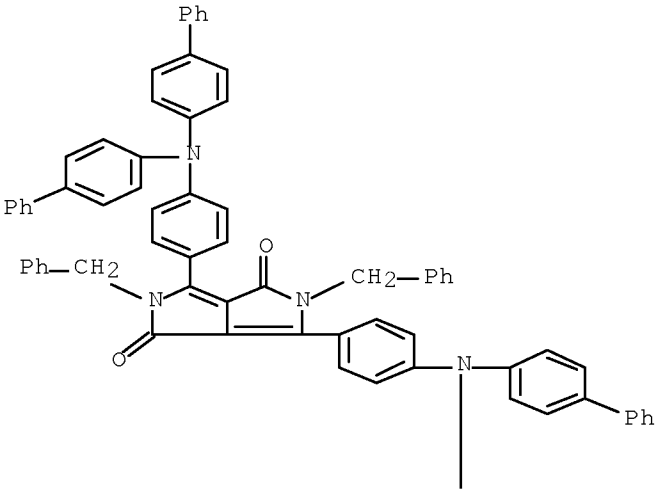


RN 532952-66-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[3-[bis(4-methylphenyl)amino]phenyl]-6-[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

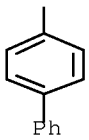


RN 532952-67-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis([1,1'-biphenyl]-4-yl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

PAGE 1-A



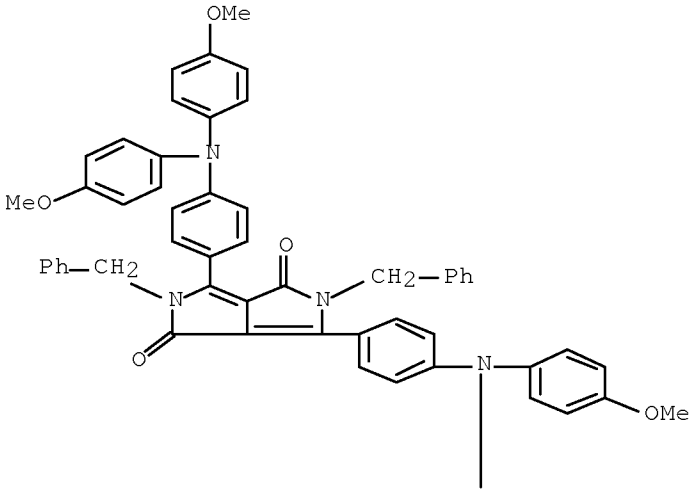
PAGE 2-A



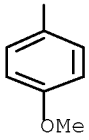
RN 532952-68-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-

methoxyphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

PAGE 1-A

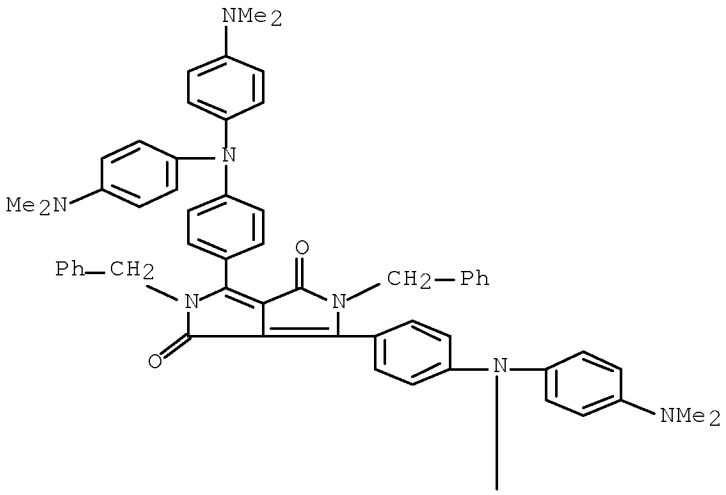


PAGE 2-A

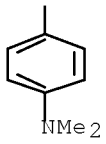


RN 532952-70-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis[4-(dimethylamino)phenyl]amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

PAGE 1-A

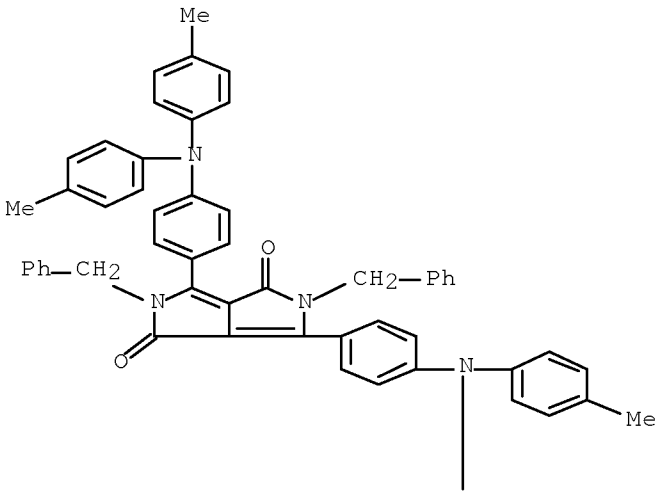


PAGE 2-A

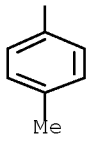


IT 532952-64-0P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)
RN 532952-64-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)

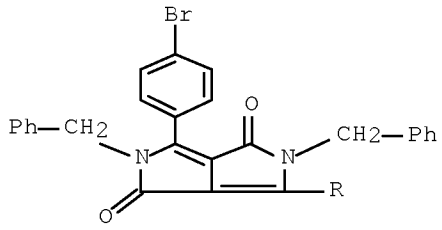
PAGE 1-A

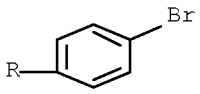


PAGE 2-A



IT 532952-72-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent diketopyrrolopyrrole compound and electroluminescent device)
RN 532952-72-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro-2,5-bis(phenylmethyl)- (CA INDEX NAME)



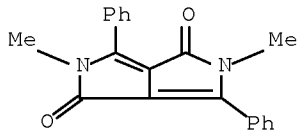


L64 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:773911 CAPLUS Full-text
DOCUMENT NUMBER: 137:286125
TITLE: Organic electroluminescent devices
INVENTOR(S): Takano, Akiko; Fujimori, Shigeo; Asuka, Noboru
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002299062	A	20021011	JP 2001-104297	20010403 <--
PRIORITY APPLN. INFO.:			JP 2001-104297	20010403 <--

AB The devices comprise: (1) a glass substrate; (2) an ITO 1st electrode; (3) a hole transport, (4) a phosphor, (5) an electron transport and (6) a 2nd electrode, where the half width of the phosphor light is < 50nm; and the optical length d between (3)/(4) and (6) is $\lambda/8 \leq d \leq 3\lambda/8$.
IC ICM H05B033-14
ICS H05B033-12; H05B033-22
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT Electrodes
Electroluminescent devices
Electron transport
Films
Fluorescence
Glass substrates
Hole transport
Luminescent substances
Phosphors
(organic electroluminescent devices)
IT 19205-19-7, Quino[2,3-b]acridine-7,14-dione, 5,12-dihydro-5,12-dimethyl- 96159-17-0 142289-08-5, DPVBi 427876-42-4
RL: MOA (Modifier or additive use); USES (Uses)
(organic electroluminescent devices)
IT 96159-17-0
RL: MOA (Modifier or additive use); USES (Uses)
(organic electroluminescent devices)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L64 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:483393 CAPLUS Full-text
DOCUMENT NUMBER: 137:294891
TITLE: Synthetic studies related to diketopyrrolopyrrole

(DPP) pigments. Part 1: The search for alkenyl-DPPs. Unsaturated nitriles in standard DPP syntheses: a novel cyclopenta[c]pyrrolone chromophore

AUTHOR(S): Morton, Colin J. H.; Gilmour, Ryan; Smith, David M.; Lightfoot, Philip; Slawin, Alexandra M. Z.; MacLean, Elizabeth J.

CORPORATE SOURCE: University of St Andrews, School of Chemistry, Fife, St Andrews, KY16 9ST, UK

SOURCE: Tetrahedron (2002), 58(27), 5547-5565
CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:294891

AB Reactions of the anion of Et 4,5-dihydro-5-oxo-2-phenylpyrrole-3- carboxylate with the Diels-Alder adducts of acrylonitrile and various dienes rarely yield the expected DPP derivs. The reaction with cyclohex-3-enecarbonitrile provides a noteworthy exception: thermolysis of the resulting cyclohexenyl-DPP gives butadiene and impure 3-ethenyl-6-phenyl-DPP, the latter being thermally unstable. Michael addns. predominate when the above anion reacts with α,β-unsatd. nitriles: acrylonitrile and methacrylonitrile give 4,4-bis(cyanoethyl) and 4,4-bis(2-cyanopropyl) derivs., and cinnamonitrile, substituted cinnamonitriles and 3-(2-thienyl)acrylonitrile give deep red 3-aryl-5-cyano-4-hydroxy-2H-cyclopenta[c]pyrrol-1-ones. These ambident nucleophiles may undergo N- and either O- or C-alkylation according to the alkylating agent used.

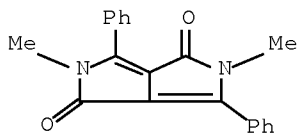
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 75

IT 54660-00-3P 88949-34-2P 96159-17-0P 105157-34-4P
167093-32-5P 469862-23-5P 469862-27-9P 469862-28-0P 469862-29-1P
469862-30-4P 469862-31-5P 469862-32-6P 469862-33-7P 469862-38-2P
469862-40-6P 469862-41-7P 469862-42-8P 469862-43-9P 469862-46-2P
469862-48-4P 469862-49-5P 469862-50-8P 469862-51-9P 469862-52-0P
469862-53-1P 469862-54-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(application of hetero Diels-Alder reactions, Michael addns., and alkylations for the preparation of alkenyl diketopyrrolopyrrole (DPP) pigments from phenylpyrrolecarboxylates and nitrile containing dienes)

IT 96159-17-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(application of hetero Diels-Alder reactions, Michael addns., and alkylations for the preparation of alkenyl diketopyrrolopyrrole (DPP) pigments from phenylpyrrolecarboxylates and nitrile containing dienes)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



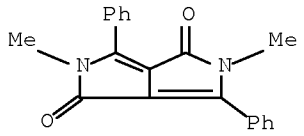
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:258437 CAPLUS Full-text
DOCUMENT NUMBER: 137:93511
TITLE: Rotational dynamics of nondipolar probes in electrolyte solutions: Can specific interactions be modeled as dielectric friction?
AUTHOR(S): Dutt, G. B.; Ghanty, T. K.
CORPORATE SOURCE: Radiation Chemistry and Chemical Dynamics Division, Bhabha Atomic Research Centre, Trombay, Bombay, 400 085, India
SOURCE: Journal of Chemical Physics (2002), 116(15), 6687-6693
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In a bid to explore how the presence of electrolyte ions influence the friction experienced by hydrogen bonding and nonhydrogen bonding solute mols., rotational dynamics of two structurally similar nondipolar probes, 2,5-dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DMDPP) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DPP), has been investigated in DMSO (DMSO) at several concns. of LiNO3. The reorientation times of DMDPP, which does not strongly interact with the solvent, follow solution viscosity and dielec. parameters as the electrolyte concentration is increased. However, for DPP, which forms hydrogen bonds with DMSO, there is a 30% decrease in the viscosity-normalized reorientation times upon the addition of 2M LiNO3 due to the presence of electrolyte ions that shield the hydrogen-bonding interactions between the solute and the solvent. However, the reorientation times correlate well with the solution dielec. parameters with an increase in the electrolyte concentration as in the case of DMDPP. An attempt has been made to model the specific interactions between DPP and DMSO as dielec. friction using the extended charge distribution model of Alavi and Waldeck since both are electrostatic in nature.

CC 22-13 (Physical Organic Chemistry)
IT Ab initio methods
CI (molecular orbital method)
Dielectric constant
Dielectric relaxation
Electrolytes
Fluorescence
Fluorescence decay
Hartree-Fock method
Hydrodynamics
Hydrogen bond
Molecular reorientation
Molecular rotation
Physical process kinetics
Simulation and Modeling
Solvent polarity effect
Viscosity
(rotational dynamics of nondipolar probes in electrolyte solns.)
IT 54660-00-3, 1,4-Dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(rotational dynamics of nondipolar probes in electrolyte solns.)
IT 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)

(rotational dynamics of nondipolar probes in electrolyte solns.)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)

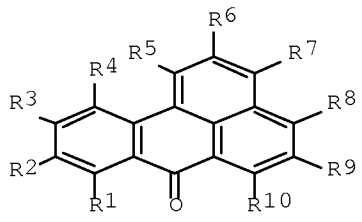


REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

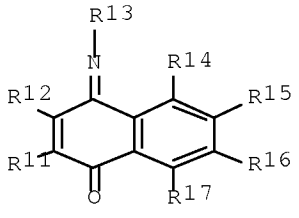
L64 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:814355 CAPLUS Full-text
DOCUMENT NUMBER: 135:364322
TITLE: Organic electroluminescent device
INVENTOR(S): Kohama, Toru; Tominaga, Takeshi; Murase, Seiichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001313175	A	20011109	JP 2000-129396	20000428 <--
PRIORITY APPLN. INFO.:			JP 2000-129396	20000428 <--

OTHER SOURCE(S): MARPAT 135:364322
GI



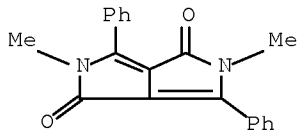
I



II

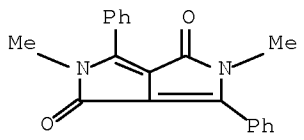
AB The invention relates to a red-emitting organic electroluminescent device having the emission peak in 580-720 nm, suited for use in making segment- and matrix-type displays, a backlight, an illumination apparatus, etc., wherein the electroluminescent layer comprises the fluorescent substance having the emission peak in 540-720 nm, as a host material, and the polycyclic ketone represented by I and II [R1-17 = H, alkyl, alkoxy, halo, etc.], as a dopant.
IC ICM H05B033-14
ICS C09K011-06
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 74
IT Electroluminescent devices
Fluorescent substances
(organic electroluminescent device)
IT 82953-57-9 96159-17-0 101955-82-2 135749-33-6 144024-60-2
145983-47-7 162845-44-5 162967-85-3 184679-91-2 188935-97-9
193145-71-0 194610-48-5 269407-70-7
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)
IT 96159-17-0
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl-
(CA INDEX NAME)



L64 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:886257 CAPLUS Full-text
DOCUMENT NUMBER: 134:178252
TITLE: Rotational dynamics of nondipolar probes in alkane-alkanol mixtures: Microscopic friction on hydrogen bonding and nonhydrogen bonding solute molecules
AUTHOR(S): Dutt, G. B.
CORPORATE SOURCE: Radiation Chemistry & Chemical Dynamics Division, Bhabha Atomic Research Centre, Trombay, Bombay, 400 085, India
SOURCE: Journal of Chemical Physics (2000), 113(24), 11154-11158
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rotational dynamics of two structurally similar nondipolar probes; 2,5-dimethyl-1,4-dioxo-3,6-di- phenylpyrrolo[3,4-c]pyrrole (DMDPP) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DPP) has been studied in mixts. of squalane-1-butanol with the idea of finding out the role of size, chemical composition, and viscosity of the solvent on the friction experienced by hydrogen bonding (DPP) and nonhydrogen bonding (DMDPP) solute mols. Although the reorientation times of both the probes followed a power law dependence on the solvent viscosity, DPP is found to rotate two to three times slower than DMDPP due to solute-solvent hydrogen bonding. The observed size effects of DMDPP have been modeled using the quasihydrodynamic theory of Gierer-Wirtz (GW). The rotational dynamics of DPP, however, follows stick hydrodynamics in the butanol rich region due to solute-solvent hydrogen bonding. But at higher concns. of squalane, DPP gets preferentially located in a cage-like structure formed by butanol mols. and even this DPP-1-butanol complex experiences microscopic friction.
CC 22-13 (Physical Organic Chemistry)
Section cross-reference(s): 68, 73

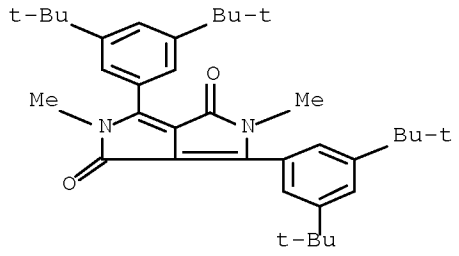
IT Fluorescence
(depolarization; steady-state fluorescence depolarization method for study of rotational dynamics of nondipolar probes in alkane-alkanol mixts.)
IT 54660-00-3, 1,4-Dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-di-phenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(solute; steady-state fluorescence depolarization method for study of rotational dynamics of nondipolar probes in alkane-alkanol mixts.)
IT 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-di-phenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(solute; steady-state fluorescence depolarization method for study of rotational dynamics of nondipolar probes in alkane-alkanol mixts.)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:785686 CAPLUS Full-text
DOCUMENT NUMBER: 134:57935
TITLE: Chromophores encapsulated in gold complexes: DPP dyes with novel properties
AUTHOR(S): Langhals, Heinz; Limmert, Michael; Lorenz, Ingo-Peter; Mayer, Peter; Piotrowski, Holger; Polborn, Kurt
CORPORATE SOURCE: Department Chemie, Universitat Munchen, Munchen, 81377, Germany
SOURCE: European Journal of Inorganic Chemistry (2000), (11), 2345-2349
CODEN: EJICFO; ISSN: 1434-1948
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Color pigments of the DPP (diketopyrrolopyrrole) type were deprotonated and coordinated to transition metal triphenylphosphine complexes M(PPh3)2 (M = Cu, Ag) and AuPPh3. Dyes were obtained with novel properties such as high solubilities, high fluorescence quantum yields, and bathochromic absorptions. The crystal structures indicate a torsion of the planes of the rings of the substituents with respect to the plane of the chromophore depending on the complex fragment.
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 75, 78
IT Dyes
Fluorescence
UV and visible spectra

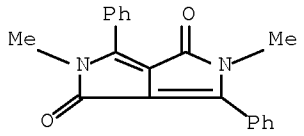
(preparation and spectra of diketopyrrolopyrrole complexes with copper, gold
and silver)
IT 107680-82-0 107711-05-7
RL: PRP (Properties)
(UV-visible and fluorescence spectra of)
IT 107711-05-7
RL: PRP (Properties)
(UV-visible and fluorescence spectra of)
RN 107711-05-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:149302 CAPLUS Full-text
DOCUMENT NUMBER: 132:293474
TITLE: Temperature-dependent rotational relaxation of nonpolar probes in mono and diols: Size effects versus hydrogen bonding
AUTHOR(S): Dutt, G. B.; Krishna, G. Rama
CORPORATE SOURCE: Radiation Chemistry and Chemical Dynamics Division, Bhabha Atomic Research Centre, Trombay, Bombay, 400 085, India
SOURCE: Journal of Chemical Physics (2000), 112(10), 4676-4682
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The rotational reorientation times of 2 nonpolar probes, 2,5-dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DMDPP) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DPP) were measured in 1-decanol and ethylene glycol as a function of temperature using steady-state fluorescence depolarization technique. Although both the probes are structurally similar and have almost identical vols., the exptl. measured reorientation times of DMDPP are longer in ethylene glycol compared to 1-decanol whereas an exactly opposite trend was observed for DPP. The faster rotation of DMDPP in 1-decanol was attributed to the larger size of 1-decanol which is 3 times bulkier than ethylene glycol and hence offers a reduced friction. This pattern was mimicked using the quasihydrodynamic theories of Gierer-Wirtz and Dote-Kivelson-Schwartz in a qual. way. The slower rotation of DPP in 1-decanol compared to ethylene glycol is due to the solute-solvent H bonding which increases the effective volume of the probe more in the case of 1-decanol than ethylene glycol.

CC 22-12 (Physical Organic Chemistry)
Section cross-reference(s): 73
IT Fluorescence
(depolarization; size effects vs. hydrogen bonding in temperature-dependent rotational relaxation of nonpolar probes in mono and diols)
IT 54660-00-3, 1,4-Dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(nonpolar probe; size effects vs. hydrogen bonding in temperature-dependent rotational relaxation of nonpolar probes in mono and diols)
IT 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(nonpolar probe; size effects vs. hydrogen bonding in temperature-dependent rotational relaxation of nonpolar probes in mono and diols)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:790974 CAPLUS Full-text
DOCUMENT NUMBER: 132:57202
TITLE: Radiographic image formation unit and apparatus and method
INVENTOR(S): Yamane, Katsutoshi; Inoue, Rikio; Fujiwara, Yoshinori
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11344600	A	19991214	JP 1998-336592	19981111 <--
JP 3981481	B2	20070926		
US 6329662	B1	20011211	US 1998-188889	19981110 <--
PRIORITY APPLN. INFO.:			JP 1997-327089 A	19971111 <--
			JP 1998-102227 A	19980330 <--

AB The title radiog. image formation unit and apparatus and method has a radiation sensitizing screen and a silver halide photog. material with a crossover measured on radiation exposure ≤10%, wherein the sensitizing screen is made of a rare earth phosphor MwOwX:M' (M = La, Gd, Lu; X = chalcogen or halo; M' = activating rare earth; w = 2 when X is chalcogen, and w =1 when X

is halo) and a fluorescent dye or pigment capable of emitting in the visible range by absorbing the emission from the phosphor. The invention can provide radiation image with superior sensitivity and sharpness.

IC ICM G21K004-00
ICS G03C001-83; G03C005-17

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

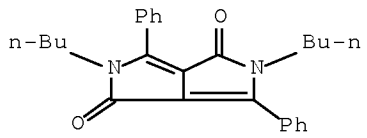
IT Fluorescent dyes
Phosphors
Photographic films
Pigments, nonbiological
Radiographic luminescent screens
(radiog. image formation unit and apparatus and method)

IT 12339-07-0, Gadolinium oxide sulfide (Gd2O2S) 27425-55-4 41175-45-5 55804-68-7 64137-49-1 96159-01-2 137079-67-5 167093-32-5 248590-19-4
RL: DEV (Device component use); USES (Uses)
(radiog. image formation unit and apparatus and method)

IT 96159-01-2
RL: DEV (Device component use); USES (Uses)
(radiog. image formation unit and apparatus and method)

RN 96159-01-2 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)

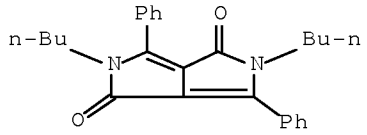


L64 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:789806 CAPLUS Full-text
DOCUMENT NUMBER: 132:57201
TITLE: Radiation sensitizing screen
INVENTOR(S): Yamane, Katsutoshi; Fujiwara, Yoshinori
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11344599	A	19991214	JP 1998-336593	19981111 <--
JP 3479603	B2	20031215		
US 2003226979	A1	20031211	US 2003-388512	20030317 <--
PRIORITY APPLN. INFO.:			JP 1997-327090 A	19971111 <--
			JP 1998-102228 A	19980330 <--
			US 1998-189991 B1	19981112 <--

AB In the title sensitizing screen having at least a phosphor layer on a support, the phosphor layer is made of Cd2O2S:Tb phosphor, and the sensitizing screen contains a fluorescent dye capable of absorbing parts of the emission of the phosphor and showing an emitting peak at 490-600 nm.

IC ICM G21K004-00
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Fluorescent dyes
Phosphors
Radiographic luminescent screens
Radiography
(radiation sensitizing screen having specified phosphor layer and containing fluorescent dye)
IT 27425-55-4 38215-36-0 55804-68-7 64137-49-1 96159-01-2
137079-67-5 167093-32-5 248590-19-4
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(radiation sensitizing screen having specified phosphor layer and containing fluorescent dye)
IT 96159-01-2
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(radiation sensitizing screen having specified phosphor layer and containing fluorescent dye)
RN 96159-01-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



L64 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:748146 CAPLUS Full-text
DOCUMENT NUMBER: 132:13103
TITLE: Process for the manufacture of pigments, especially fluorescent pigments
INVENTOR(S): Marcq, Michel Jean; Tanner, Martin
PATENT ASSIGNEE(S): Societe Nouvelle de Chimie Industrielle S.A., Fr.; Ciba Specialty Chemicals Holding, Inc.
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 969,618, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5989453	A	19991123	US 1994-206160	19940307 <--
FR 2661917	A1	19911115	FR 1990-5910	19900511 <--
FR 2661917	B1	19941021		
EP 542669	A1	19930519	EP 1992-810747	19921005 <--
EP 542669	B1	19970416		

R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL

PRIORITY APPLN. INFO.:	FR 1990-5910	A	19900511 <--
	US 1991-698776	B1	19910513 <--

EP 1991-402945	A	19911104 <--
EP 1992-810747	A	19921005 <--
US 1992-969618	B2	19921030 <--
US 1993-123037	B2	19930920 <--

OTHER SOURCE(S): MARPAT 132:13103

AB Methods for manufacturing pigments comprising a colored composition incorporated in a polycondensation resin by continuous bulk polycondensation of a reaction mixture are described which entail continuously introducing the reactants for the formation of the polycondensation resin and the colored composition into an extruder, causing the mixture to react and to travel forward in the extruder, continuously withdrawing, at the end of the reaction, the mixture from the extruder, depositing the mixture continuously onto a conveyor belt, breaking the mixture up into thermoset flakes and cooling the thermoset flakes, the the conveyor belt having means for cooling and detaching the the thermoset flakes from the conveyor belt and, following cooing, micronizing the flakes to a particle size of 0.5-20 μm. Compns. are also described which comprise a diketo-pyrrolo-pyrrole colorant and a polycondensation resin selected from the group consisting of crosslinked polyester resins from aromatic polycarboxylic acids or their anhydrides and bifunctional or polyfunctional alcs., polyester resins, which are substantially crystalline thermoplastic opaque polyester resins prepared by reacting mixts. of linear monomers with branched or substituted monomers, polyamide resins formed by the reaction of a polyfunctional amine with both a polycarboxylic acid and a monocarboxylic acid, the polyamide being in the mol. weight range 400-2500, and polyamide resins which are formed by reacting a diamine with an excess stoichiometric amount of diacid. Printing inks, paints or lacquers, or pastes or plastisols which contain the pigments, and mass-colored plastic materials, paper sheets, or textiles which contain or are coated with the pigments are also described.

IC C09K011-02; C08J005-45; C08K005-00

INCL 252301350

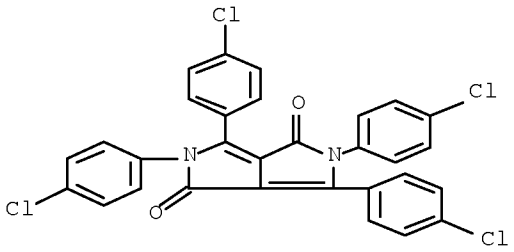
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 42

IT Extrusion of plastics and rubbers
Fluorescent pigments
Lacquers
Paints
Pigments, nonbiological
(polycondensation resin-based pigment manufacture and the pigments and materials incorporating them)

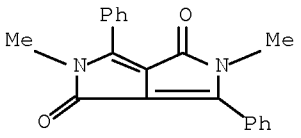
IT 81-88-9, Basic violet 10 117-84-0, Dioctyl phthalate 989-38-8, Basic red 1 1314-13-2, Zinc oxide, uses 2390-60-5, Basic blue 7 2478-20-8, Solvent yellow 44 3251-84-1, Flexo Blue 630 12217-50-4, Basic yellow 13 12221-86-2, Fluorescent yellow AA 216 12671-74-8, Hostasol Yellow 3G 12768-85-3, Basic yellow 19 16143-80-9, Pigment green 19125-99-6 54660-00-3 61847-53-8, C.I. Basic yellow 45 84632-59-7 84632-65-5 96159-05-6 96159-17-0 251458-81-8, C.I. Solvent Yellow 172
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(polycondensation resin-based pigment manufacture and the pigments and materials incorporating them)

IT 96159-05-6 96159-17-0
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(polycondensation resin-based pigment manufacture and the pigments and materials incorporating them)

RN 96159-05-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,3,5,6-tetrakis(4-chlorophenyl)-2,5-dihydro- (CA INDEX NAME)



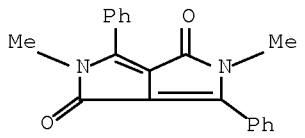
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:742927 CAPLUS Full-text
DOCUMENT NUMBER: 132:92891
TITLE: Rotational dynamics of pyrrolopyrrole derivatives in glycerol: A comparative study with alcohols
AUTHOR(S): Dutt, G. B.; Srivatsavoy, V. J. P.; Sapre, A. V.
CORPORATE SOURCE: Radiation Chemistry and Chemical Dynamics Division, Bhabha Atomic Research Centre, Trombay, Bombay, 400 085, India
SOURCE: Journal of Chemical Physics (1999), 111(21), 9705-9710
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The rotational dynamics of 2 structurally similar nonpolar mols., 2,5-dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (I) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (II) were studied in glycerol (III) at 300-380 K using both time-resolved and steady-state fluorescence depolarization. While the reorientation times of both probes vary linearly as a function of viscosity over temperature, the rotational dynamics of I are described by the Stokes-Einstein-Debye hydrodynamic theory with slip-boundary condition, whereas the reorientation times of II are between slip and stick limits and are about a factor of 1.5 longer than that of I. This is due to H bonding between the 2 NH groups of the probe mol. and the O atoms of the hydroxyl groups in III. The rotational dynamics of a nonpolar and noninteracting mol. like I are essentially the same, both in III and in n-alcs.

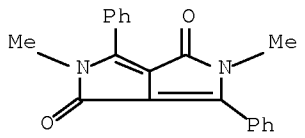
CC 22-3 (Physical Organic Chemistry)
IT Fluorescence
(depolarization; fluorescence-depolarization study of rotational dynamics of pyrrolopyrrole derivs. in glycerol and alcs.)
IT 54660-00-3, 1,4-Dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PRP (Properties)
(fluorescence-depolarization study of rotational dynamics of pyrrolopyrrole derivs. in glycerol and alcs.)
IT 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PRP (Properties)
(fluorescence-depolarization study of rotational dynamics of pyrrolopyrrole derivs. in glycerol and alcs.)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:277099 CAPLUS Full-text
DOCUMENT NUMBER: 131:94179
TITLE: Rotational dynamics of pyrrolopyrrole derivatives in alcohols: Does solute-solvent hydrogen bonding really hinder molecular rotation?
AUTHOR(S): Dutt, G. B.; Srivatsavoy, V. J. P.; Sapre, A. V.
CORPORATE SOURCE: Chemistry Division, Bhabha Atomic Research Centre, Tromby, Bombay, 400 085, India
SOURCE: Journal of Chemical Physics (1999), 110(19), 9623-9629
CODEN: JCPSA6; ISSN: 0021-9606
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rotational reorientation times of 2 structurally similar nonpolar mols., 2,5-dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DMDPP) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DPP) were measured in n-alcs. using steady-state fluorescence depolarization. While both DMDPP and DPP contain 2 C:O groups, the latter has 2 NH groups. As these groups are known to form H bonds with alc. solvents, the present work is aimed at finding out whether or not such solute-solvent H bonding is effecting the rotation of the probe mols. The rotational dynamics of DMDPP is explained reasonably well by the Stokes-Einstein-Debye (SED) hydrodynamic theory with slip boundary condition. The H bonding between the 2 C:O groups of the probe and the solvent mols. is not influencing the rotation of DMDPP. The reorientation times of DPP are longer by a factor of 2.2 to 3.3 compared to that of DMDPP, and followed a super-stick behavior which was observed for a nonpolar solute mol. This is due to the strong H bonding between the 2 NH groups of the probe, and the alc. solvent mols.

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22
IT Fluorescence
(depolarized, steady-state; rotational dynamics of pyrrolopyrrole derivs. in alcs. and solute-solvent hydrogen bonding hindrance of mol. rotation measured using)
IT 54660-00-3, 1,4-Dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(rotational dynamics in alcs. and solute-solvent hydrogen bonding hindrance of mol. rotation measured using steady-state fluorescence depolarization)
IT 96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(rotational dynamics in alcs. and solute-solvent hydrogen bonding hindrance of mol. rotation measured using steady-state fluorescence depolarization)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:543126 CAPLUS Full-text
DOCUMENT NUMBER: 129:195610
TITLE: Fluorescent materials and their use
INVENTOR(S): Otani, Junji; Kunimoto, Kazuhiko; Deno, Takashi; Devlin, Brian Gerrard; Kodama, Kunihiko
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9833862	A1	19980806	WO 1998-EP314	19980121 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,

FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9866151	A	19980825	AU 1998-66151	19980121	<--
AU 732936	B2	20010503			
EP 968254	A1	20000105	EP 1998-907969	19980121	<--
EP 968254	B1	20040915			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI					
JP 2001513826	T	20010904	JP 1998-532504	19980121	<--
ES 2164417	T3	20020216	ES 1998-906882	19980121	<--
PT 963426	T	20020228	PT 1998-906882	19980121	<--
ES 2171289	T3	20020901	ES 1998-904111	19980121	<--
AT 276331	T	20041015	AT 1998-907969	19980121	<--
ES 2227805	T3	20050401	ES 1998-907969	19980121	<--
US 6103446	A	20000815	US 1998-17869	19980203	<--
US 6146809	A	20001114	US 1998-17868	19980203	<--
US 6274065	B1	20010814	US 1998-17871	19980203	<--
US 2001016269	A1	20010823	US 1998-17872	19980203	<--
US 6413655	B2	20020702			
TW 509717	B	20021111	TW 1998-87101741	19980210	<--
TW 518360	B	20030121	TW 1998-87101743	19980210	<--
TW 526252	B	20030401	TW 1998-87101742	19980210	<--
TW 557322	B	20031011	TW 1998-87101740	19980210	<--
TW 220902	B	20040911	TW 1998-87101739	19980210	<--
US 2003023097	A1	20030130	US 2002-135809	20020430	<--
US 6562981	B2	20030513			

PRIORITY APPLN. INFO.:	EP 1997-810049	A	19970203	<--
	EP 1997-810050	A	19970203	<--
	EP 1997-810051	A	19970203	<--
	EP 1997-810054	A	19970204	<--
	EP 1997-810055	A	19970204	<--
	WO 1998-EP314	W	19980121	<--
	US 1998-17872	A	19980203	<--

OTHER SOURCE(S): MARPAT 129:195610

AB Compns. comprising an effective amount of a guest chromophore embedded in a matrix of a host chromophore, or a host chromophore and an effective amount of a guest chromophore both embedded in a polymer matrix are described in which the absorption spectrum of the guest chromophore overlaps with the fluorescence emission spectrum of the host chromophore, and wherein the host chromophore is selected from the group consisting of benzo [4,5] imidazo [2,1-a] isoindol-11-ones. Methods for preparing the compns entailing forming a mixture of the guest chromophore with the host chromophore and optionally a polymer or polymer precursor and precipitating the chromophores are also described. Use of the compns. as fluorescent materials and as electroluminescent materials, and electroluminescent devices using the materials, are also described.

IC ICM C09K011-06
ICS C07D487-04; C09B057-12

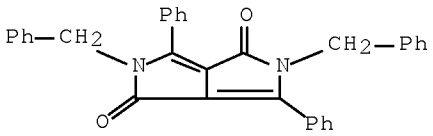
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 28, 42

IT Electroluminescent devices
Fluorescent pigments
Fluorescent substances
(guest-host fluorescent compns. and their use)

IT 96159-02-3P 99762-81-9P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(guest-host fluorescent compns. and their use)

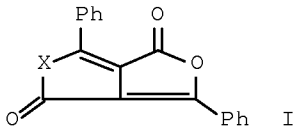
IT 96159-02-3P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
(guest-host fluorescent compns. and their use)
RN 96159-02-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:296099 CAPLUS Full-text
DOCUMENT NUMBER: 125:35817
TITLE: Highly photostable organic fluorescent pigments - a simple synthesis of N-arylpyrrolopyrrolediones (DPP)
AUTHOR(S): Langhals, Heinz; Grundei, Thomas; Potrawa, Thomas; Polborn, Kurt
CORPORATE SOURCE: Institut Organische Chemie, Universitaet Muenchen, Munich, D-80333, Germany
SOURCE: Liebigs Annalen (1996), (5), 679-682
CODEN: LANAEM; ISSN: 0947-3440
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



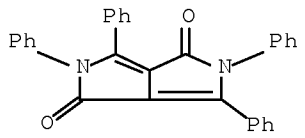
AB Several DPP were prepared by the condensation of the corresponding lactones I (X = O, NPh) with arylamines in the presence of DCC. Bright red pigments were obtained with an intense red to orange solid-state fluorescence.
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 28
IT Fluorescence
(UV, of N-arylpyrrolopyrroledione fluorescent pigments)
IT Fluorescent substances
(pigments, preparation and UV and fluorescence spectra of N-arylpyrrolopyrroledione fluorescent pigments)
IT 128318-54-7P 128318-55-8P 177739-71-8P
177739-72-9P 177739-73-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation and UV and fluorescence spectra of N-arylpyrrolopyrroledione fluorescent pigments)

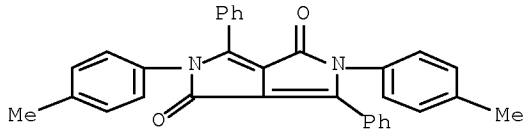
IT 54660-00-3 107680-84-2
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(preparation and UV and fluorescence spectra of N-arylpyrrolopyrroledione fluorescent pigments)

IT 128318-54-7P 128318-55-8P 177739-71-8P
177739-72-9P 177739-73-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and UV and fluorescence spectra of N-arylpyrrolopyrroledione fluorescent pigments)

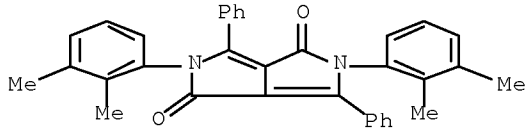
RN 128318-54-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,3,5,6-tetraphenyl- (CA INDEX NAME)



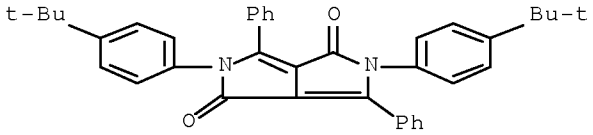
RN 128318-55-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis(4-methylphenyl)-3,6-diphenyl- (CA INDEX NAME)



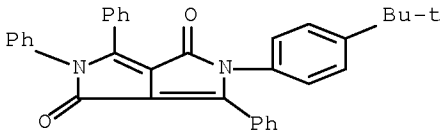
RN 177739-71-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(2,3-dimethylphenyl)-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



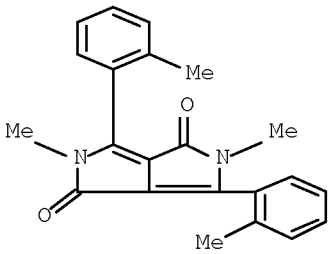
RN 177739-72-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



RN 177739-73-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2-[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-3,5,6-triphenyl- (CA INDEX NAME)



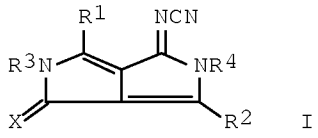
IT 107680-84-2
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(preparation and UV and fluorescence spectra of N-arylpyrrolopyrroledione fluorescent pigments)
RN 107680-84-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(2-methylphenyl)- (CA INDEX NAME)



L64 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:994519 CAPLUS Full-text
DOCUMENT NUMBER: 124:32007
TITLE: Pyrrolo[3,4-c]pyrroles substituted by cyanimino groups, their preparation, and polymeric materials colored with them
INVENTOR(S): Zambounis, John S.; Hao, Zhimin; Iqbal, Abul
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 673940	A1	19950927	EP 1995-810175	19950316 <--
EP 673940	B1	20020502		
R: CH, DE, FR, GB, LI				
US 5527922	A	19960618	US 1995-407746	19950321 <--
CA 2145374	A1	19950926	CA 1995-2145374	19950323 <--
JP 07292273	A	19951107	JP 1995-65349	19950324 <--
JP 3739433	B2	20060125		

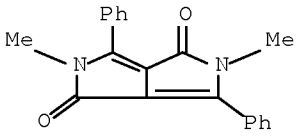
PRIORITY APPLN. INFO.: CH 1994-915 A 19940325 <--
OTHER SOURCE(S): MARPAT 124:32007
GI



I

AB The compds. [I; R1, R2 = (hetero)aryl; R3, R4 = H, C1-18 alkyl, C2-4 alkenyl, C7-10 aralkyl, (un)substituted Ph, CO2R5; R5 = C1-5 alkyl, CH2Ph, CH2SO2Ph, piperidinyl, 4-pyridinylmethyl; X = O, NCN] are useful as dyes or pigments for polymers, especially polyesters, showing an unexpectedly high fluorescence in the solid state. Thus, a solution of Me3SiN:C:NSiMe3 in o-Cl2C6H4 was added to a solution of an equimolar amount of TiCl4 in o-Cl2C6H4, followed by a suspension of 2,5-dihydro-2,5-dimethyl-3,6- diphenylpyrrolo[3,4-c]pyrrole-1,4-dione in o-Cl2C6H4. After 8 days at 80° the suspension was filtered to give, after purification, 67% fluorescent bordeaux I (R1 = R2 = Ph, R3 = R4 = Me, X = NCN) powder, λmax 530 nm in PhCN.

IC ICM C07D487-04
ICS C08K005-3415
ICA C09B057-00
ICI C07D487-04, C07D209-00
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 37
IT Fluorescent substances
(pigments, pyrrolopyrroles substituted by cyanimino groups as fluorescent dyes and pigments)
IT 420-04-2, Cyanamide 1000-70-0, Bis(trimethylsilyl)carbodiimide 96159-17-0, 2,5-Dihydro-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of pyrrolopyrroles substituted by cyanimino groups as fluorescent dyes and pigments)
IT 96159-17-0, 2,5-Dihydro-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of pyrrolopyrroles substituted by cyanimino groups as fluorescent dyes and pigments)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L64 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:961624 CAPLUS Full-text
DOCUMENT NUMBER: 124:30529
TITLE: Exploration of the Stille Coupling Reaction for the Synthesis of Functional Polymers
AUTHOR(S): Bao, Zhenan; Chan, Wai Kin; Yu, Luping
CORPORATE SOURCE: Department of Chemistry, University of Chicago, Chicago, IL, 60637, USA
SOURCE: Journal of the American Chemical Society (1995), 117(50), 12426-35
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The palladium-catalyzed Stille coupling reaction was used for preparing functionalized, conjugated polymers. This reaction has several advantages, two of which are that it requires mild reaction conditions and produces high yields. Several factors which affect the polymerization processes were investigated, such as the catalyst composition and concentration, different solvents and ligands, and structures of monomers. It was found that solvents that could keep the macromols. in solution and stabilize the palladium(0) catalyst would yield polymers with high mol. wts. If a Pd(II) compound was used as the catalyst, a stoichiometric adjustment of the distannyl monomer was necessary to enhance the mol. weight of the resulting polymer. In general, it is found that a combination of an electron-rich distannyl monomer and an electron-deficient dihalide (ditriflate) monomer forms polymers with relatively high mol. wts. To further demonstrate the versatility of the Stille reaction for polycondensations, different types of conjugated polymers with different properties and applications, such as liquid crystalline conjugated polymers and conjugated photorefractive polymers, have been synthesized.

CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 75, 76

IT Fluorescence
Glass temperature and transition
Molecular weight
Oxidation, electrochemical
(characterization of conjugated polymers prepared by Stille coupling)

IT 171569-28-1P 171569-29-2P 171569-30-5P 171757-89-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(Stille coupling for preparation of functional polymers)

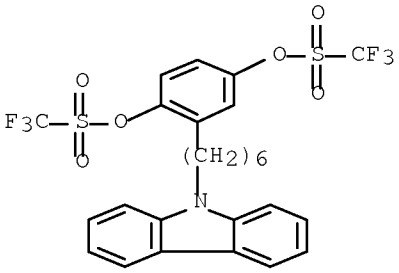
IT 171569-29-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(Stille coupling for preparation of functional polymers)

RN 171569-29-2 CAPLUS

CN Methanesulfonic acid, trifluoro-, 2-[6-(9H-carbazol-9-yl)hexyl]-1,4-phenylene ester, polymer with (2,5-dihexyl-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)di-4,1-phenylene bis(trifluoromethanesulfonate) and 2,5-thiophenediylbis[tributylstannane] (9CI) (CA INDEX NAME)

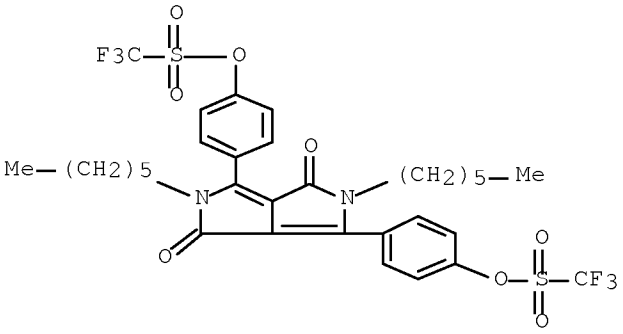
CM 1

CRN 171569-15-6
CMF C26 H23 F6 N O6 S2



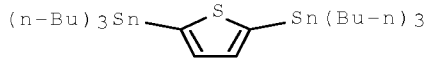
CM 2

CRN 151426-38-9
CMF C32 H34 F6 N2 O8 S2



CM 3

CRN 145483-63-2
CMF C28 H56 S Sn2



L64 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:568877 CAPLUS Full-text
DOCUMENT NUMBER: 122:314058
TITLE: Polarized Light Spectroscopy of Dihydropyrrolopyrroledione in Liquids and Liquid Crystals: Molecular Conformation and Influence by an

Anisotropic Environment
AUTHOR(S): Edman, Peter; Johansson, Lennart B.-A.; Langhals, Heinz
CORPORATE SOURCE: Department of Physical Chemistry, University of Umea, Umea, S-901 87, Swed.
SOURCE: Journal of Physical Chemistry (1995), 99(21), 8504-9
CODEN: JPCHAX; ISSN: 0022-3654
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Different Ph derivs. of dihydropyrrolopyrrolediones (DPP) have been examined by means of polarized absorption and fluorescence spectroscopy. The derivs. were 3,6-bis(3,5-di-tert-butylphenyl)-2,5-dihydropyrrolo[3,4- c]pyrrole-1,4-dione (BDPP), 3,6-bis(2-methoxyphenyl)-2,5- dimethylpyrrolo[3,4-c]pyrrole-1,4-dione (MMDPP), 3,6-bis(2-methoxyphenyl)- 2-hydro-5-methylpyrrolo[3,4-c]pyrrole-1,4-dione (MHDPP) and 3,6-bis(2-methoxyphenyl)-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (HHDPP). Intramol. hydrogen bonds can form between the DPP core and the Ph groups of MHDPP and HHDPP. The Stokes shift (ca. 10-70 nm) and the bandshape of absorption and fluorescence spectra depend strongly on possibilities of intramol. π-electronic overlapping of the DPP core and the Ph groups. Different conformations of the DPP and aryl planes are likely present. The rate of transfer between these conformations is rapid, which is supported by the monoexponential photophysics observed for all derivs. The lifetime varies between 5.5 and 9 ns in different liquid solvents, as well as in a lyotropic nematic liquid crystal. The fluorescence quantum yields and Forster radii are reported. The wavelength dependence of the limiting fluorescence excitation and emission anisotropies have been studied. Except from MMDPP and MHDPP, the S0 ↔ S1 bands constitute one direction of the transition dipoles corresponding to the same limiting anisotropy of r0 = 0.38. Second rank order parameters of the ground and excited state were determined for the DPP derivs. solubilized in a macroscopically aligned lyotropic nematic liquid crystal. Taken together, the exptl. results suggest that the mol. symmetry of HHDPP is the same in the ground and the first excited states, contrary to the other derivs.

CC 22-9 (Physical Organic Chemistry)

IT Fluorescence
(anisotropy; of dihydropyrrolopyrroledione in liqs. and liquid crystals)

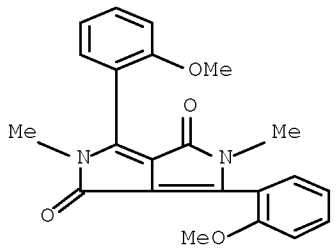
IT Fluorescence
(excitation, anisotropy; of dihydropyrrolopyrroledione in liqs. and liquid crystals)

IT 107680-82-0, 3,6-Bis(3,5-di-tert-butylphenyl)-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione 119273-54-0, 3,6-Bis(2-methoxyphenyl)-2,5-dimethylpyrrolo[3,4-c]pyrrole-1,4-dione 119273-55-1, 3,6-Bis(2-methoxyphenyl)-pyrrolo[3,4-c]pyrrole-1,4-dione 163403-13-2, 3,6-Bis(2-methoxyphenyl)-2-hydro-5-methylpyrrolo[3,4-c]pyrrole-1,4-dione
RL: PRP (Properties)
(polarized absorption and fluorescence spectroscopy of dihydropyrrolopyrroledione in liqs. and liquid crystals)

IT 119273-55-1, 3,6-Bis(2-methoxyphenyl)-pyrrolo[3,4-c]pyrrole-1,4-dione
RL: PRP (Properties)
(polarized absorption and fluorescence spectroscopy of dihydropyrrolopyrroledione in liqs. and liquid crystals)

RN 119273-55-1 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(2-methoxyphenyl)-2,5-dimethyl- (CA INDEX NAME)



L64 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:397089 CAPLUS Full-text
DOCUMENT NUMBER: 122:134672
TITLE: Detailed Studies on a New Conjugated Photorefractive Polymer
AUTHOR(S): Yu, Luping; Chen, Yong Ming; Chan, Wai Kin
CORPORATE SOURCE: Department of Chemistry, University of Chicago, Chicago, IL, 60637, USA
SOURCE: Journal of Physical Chemistry (1995), 99(9), 2797-2802
CODEN: JPCHAX; ISSN: 0022-3654
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel photorefractive polymer containing a conjugated backbone and a second-order nonlinear optical chromophore was investigated. Detailed studies including photocond., carrier mobility, and the grating formation demonstrated the photorefractive nature of the polymer. A large optical gain of 5.9 cm-1 was observed under a zero-external field. Investigations of the grating phase in this polymer revealed features of the refractive index grating and the absorption grating. Several exptl. results suggested that an internal field existed in the polymer. This internal field assisted charge separation and enhanced the photorefractivity.

CC 37-5 (Plastics Manufacture and Processing)

IT Electric current carriers
Photoconductivity and Photoconduction
(of photorefractive polymers with conjugated backbond and second-order nonlinear pendent chromophore)

IT 151483-30-6
RL: PRP (Properties)
(photorefractive, conductivity and grating formation properties of)

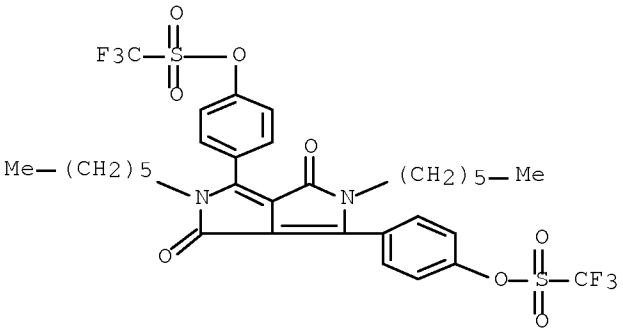
IT 151483-30-6
RL: PRP (Properties)
(photorefractive, conductivity and grating formation properties of)

RN 151483-30-6 CAPLUS

CN Methanesulfonic acid, trifluoro-, (2,5-dihexyl-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)di-4,1-phenylene ester, polymer with 2-[6-[methyl[4-[2-[4-(methylsulfonyl)phenyl]ethenyl]phenyl]amino]hexyl]-1,4-phenylene bis(trifluoromethanesulfonate) and 2,5-thiophenediylbis[tributylstannane] (9CI) (CA INDEX NAME)

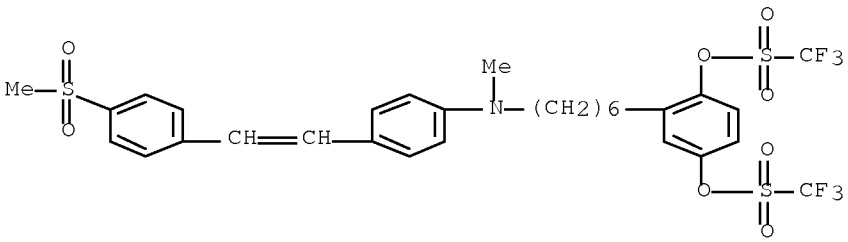
CM 1

CRN 151426-38-9
CMF C32 H34 F6 N2 O8 S2



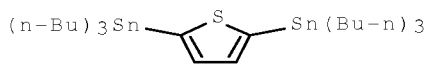
CM 2

CRN 151426-35-6
CMF C30 H31 F6 N O8 S3

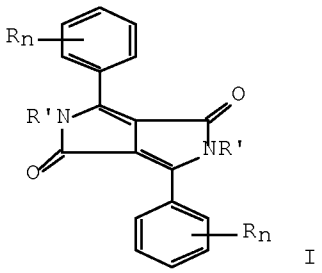


CM 3

CRN 145483-63-2
CMF C28 H56 S Sn2



L64 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:460637 CAPLUS Full-text
DOCUMENT NUMBER: 107:60637
TITLE: Fluorescent dyes with large Stokes shifts - soluble dihydropyrrolopyrrolediones
AUTHOR(S): Potrawa, Thomas; Langhals, Heinz
CORPORATE SOURCE: Inst. Org. Chem., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1987), 120(7), 1075-8
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German
GI



I

AB Fluorescent 3,6-diaryl-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-diones (I; R' = H; R = Me, tert-Bu; n = 0-2) and 3,6-diaryl-2,5-dihydro-2,5- dimethylpyrrolo[3,4-c]pyrrole-1,4-diones (I; R' = Me; R = Me, tert-Bu; n = 0-2) were prepared from RnC6H4-nCN and di-Et succinate followed by optional methylation. I (R = tert-Bu) were photostable in organic solvents. If a conformational conversion followed the excitation, Stokes shifts of ≤70 nm with fluorescent quantum yields of ≤95% were obtained in CHCl3.

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

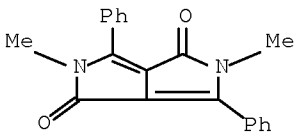
IT Fluorescence
(of pyrrolopyrrolediones, Stokes shift in relation to)

IT 54660-00-3P 84632-59-7P 96159-17-0P 107680-82-0P
107680-83-1P 107680-84-2P 107680-85-3P
107711-05-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of fluorescent, Stokes shift in relation to)

IT 96159-17-0P 107680-84-2P 107680-85-3P
107711-05-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of fluorescent, Stokes shift in relation to)

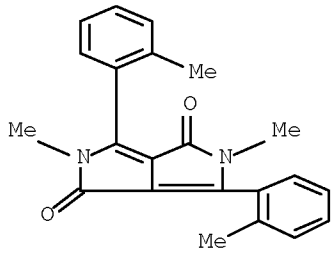
RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)

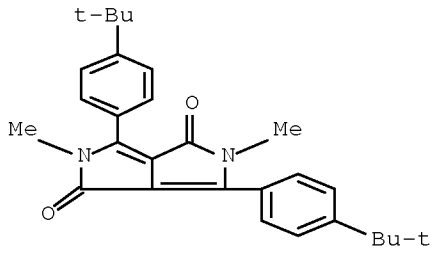


RN 107680-84-2 CAPLUS

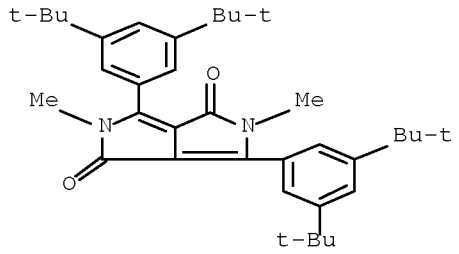
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(2-methylphenyl)- (CA INDEX NAME)



RN 107680-85-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 107711-05-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



CLAIMS 7-10, SEARCH #2 STRUCTURES FROM INVENTORS' INDEXED WORK THAT MATCH CLAIM

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=> d que nos l60
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L4              STR
L12             STR
L19             STR
L20             STR
L21             STR
L22             STR
L25         481 SEA FILE=REGISTRY SUB=L2 SSS FUL (L4 OR L12 OR L19 OR L20 OR
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L29         480 SEA FILE=REGISTRY ABB=ON  L25 NOT L28
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L58          36 SEA FILE=REGISTRY ABB=ON  L57 AND L37
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L60          36 SEA FILE=CAPLUS ABB=ON  L31 AND L59
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=> s l60 not l47,l62,l64
L65         21 L60 NOT (L47 OR L62 OR L64)  PREVIOUSLY DISPLAYED REFERENCES REMOVED

=> s l65 and l33
L66         15 L65 AND L33    DATE LIMIT

=> d ibib abs hitstr 1-15 l66

L66  ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2003:559854  CAPLUS  Full-text
DOCUMENT NUMBER:          139:124831
TITLE:                    Tetraphenylmethane derivatives and high-efficiency
                          electroluminescent devices therewith of good color
                          purity
INVENTOR(S):              Kitazawa, Daisuke; Kohama, Toru; Tominaga, Takeshi
PATENT ASSIGNEE(S):       Toray Industries, Inc., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 13 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 2003206278         A     20030722    JP 2002-297030          20021010 <--
PRIORITY APPLN. INFO.:                       JP 2001-312518      A   20011010 <--
OTHER SOURCE(S):          MARPAT 139:124831
GI
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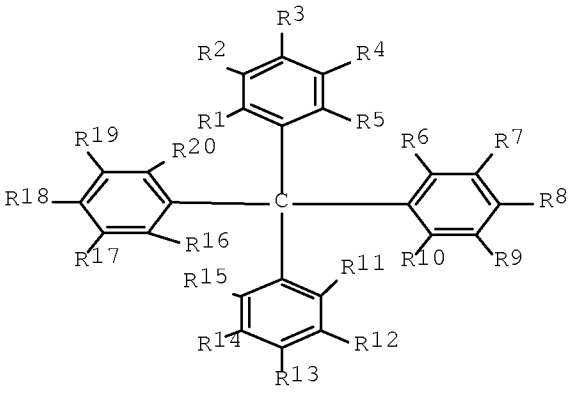

I

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AB    The derivs. are I [R1-R20 = (cyclo)alkyl, aralkyl, alkenyl, OH, amino, nitro,
      etc., where ≥1 of R1-R5 and ≥1 of R6-R10 are pyridine ring-containing
      substituent], included in emission layers of the claimed electroluminescent
      devices.
IT    427375-50-6
      RL: DEV (Device component use); USES (Uses)
         (emission layers; pyridyl-containing tetraphenylmethanes for
         electron-transporting materials of LED of high color purity and
         luminescent efficiency)
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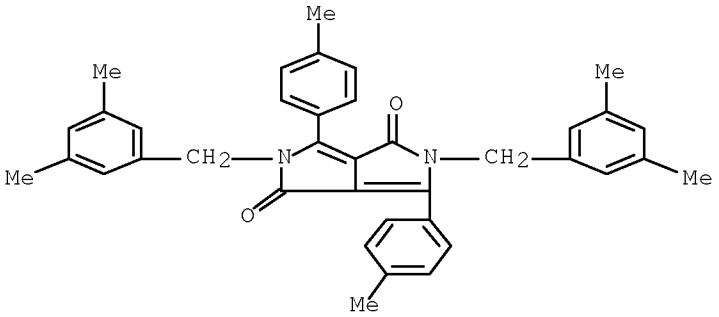
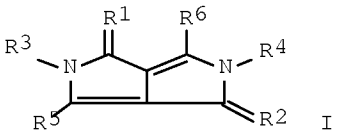
RN 427375-50-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis[(3,5-dimethylphenyl)methyl]-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



L66 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:68863 CAPLUS Full-text
DOCUMENT NUMBER: 138:114835
TITLE: Organic electroluminescent material and organic electroluminescent element
INVENTOR(S): Suda, Yasumasa
PATENT ASSIGNEE(S): Toyo Ink MFG. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003027049	A	20030129	JP 2001-221016	20010723 <--
PRIORITY APPLN. INFO.:			JP 2001-221016	20010723 <--

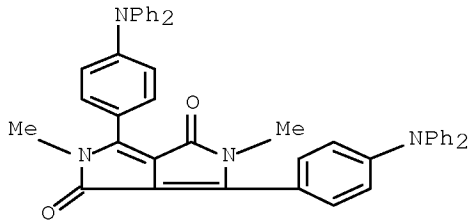
OTHER SOURCE(S): MARPAT 138:114835
GI



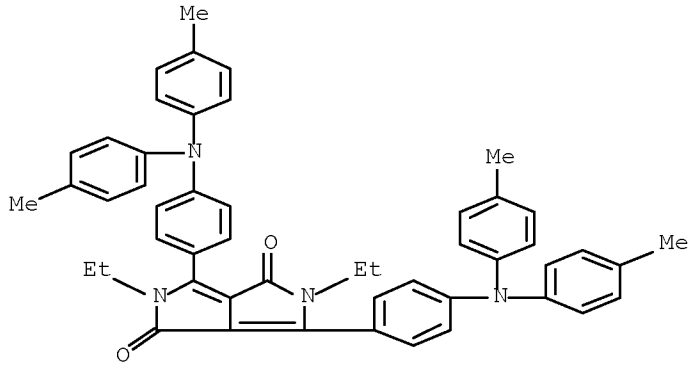
I

AB The invention refers to an organic electroluminescent material I [R1,2 = O or cyano-substituted N, where both R1 and R1 may not be O; R3,4 = H, halo, alkyl, alkenyl, aryl, heterocyclic or COOR7; R7 = alkyl, alkenyl, aryl or heterocyclic; R5,6 = aryl or heterocyclic].
IT 488134-84-5P 488134-89-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(pyrrole derivative organic electroluminescent material and organic electroluminescent element)

RN 488134-84-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(diphenylamino)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 488134-89-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[bis(4-methylphenyl)amino]phenyl]-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



L66 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:925397 CAPLUS Full-text
DOCUMENT NUMBER: 138:18084
TITLE: Photosensitive composition
INVENTOR(S): Shibuya, Akinori; Kunita, Kazuto
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 57 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1262829	A1	20021204	EP 2002-11607	20020528 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002351071	A	20021204	JP 2001-159059	20010528 <--
JP 2002351072	A	20021204	JP 2001-159180	20010528 <--
JP 2002351065	A	20021204	JP 2001-159211	20010528 <--
US 2003077541	A1	20030424	US 2002-155065	20020528 <--

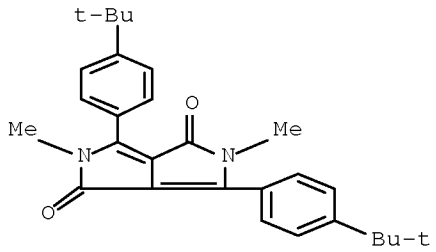
US 6878505 B2 20050412
PRIORITY APPLN. INFO.: JP 2001-159059 A 20010528 <--
JP 2001-159180 A 20010528 <--
JP 2001-159211 A 20010528 <--
OTHER SOURCE(S): MARPAT 138:18084
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

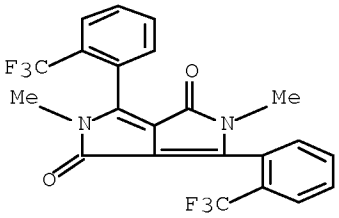
AB A photosensitive composition comprises (i) a sensitizing dye represented by the following formula I (R1-8 = H, halogen atom, alkyl, alkoxy, alkylthio, aryloxy, arylthio, alkenyl, aralkyl, acyl, aryl, heteroaryl, alkylsulfonic acid group; X1-2 = O, S), II (R1-8 = H, halogen atom, alkyl, alkoxy, alkylthio, aryloxy, arylthio, alkenyl, aralkyl, acyl, aryl, heteroaryl, alkylsulfonic acid group;X= O, S; A = C1-20 aryl or heteroaryl group), III (Y = O, S; Q1= H, Me group, Et group, Ph group; Q2-11 = H, halogen atom, cyano group, nitro group, sulfonic acid group, C1-5 alkyl group); (ii) a titanocene compound; and (iii) a compound of undergoing a reaction with at least one of a radical and an acid to change at least one of its phys. and chemical properties and maintaining the changed phys. or chemical property, and a lithog. printing plate having a photosensitive layer comprising the photosensitive composition

IT 107680-85-3 288095-08-9 288095-10-3
477719-72-5 477719-73-6
RL: TEM (Technical or engineered material use); USES (Uses)
(sensitizing dye; photosensitive composition lithog. for printing plates containing)

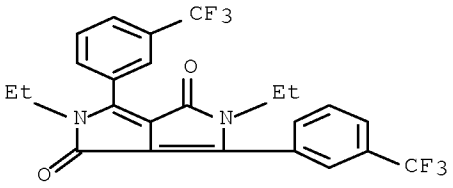
RN 107680-85-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



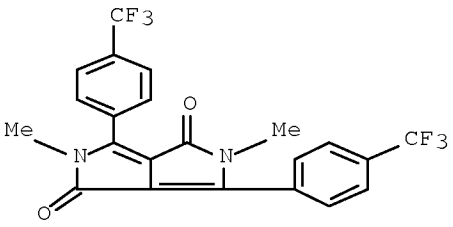
RN 288095-08-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[2-(trifluoromethyl)phenyl]- (CA INDEX NAME)



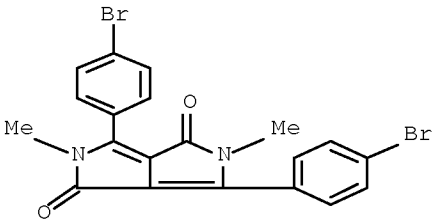
RN 288095-10-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[3-(trifluoromethyl)phenyl]- (CA INDEX NAME)



RN 477719-72-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)



RN 477719-73-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



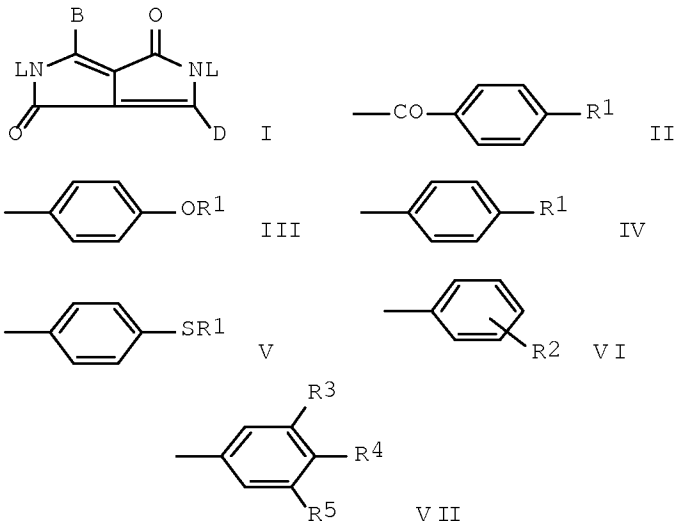
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:670142 CAPLUS Full-text
DOCUMENT NUMBER: 131:305218
TITLE: Diketopyrrolopyrrole liquid crystals for display devices
INVENTOR(S): Hao, Zhimin; Iqbal, Abul; Tebaldi, Nancy; Praefcke, Klaus
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corp., USA
SOURCE: U.S., 20 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
US 5969154	A	19991019	US 1997-988419		19971210	<--
PRIORITY APPLN. INFO.:			CH 1996-3026	A	19961210	<--
			CH 1996-3027	A	19961210	<--
OTHER SOURCE(S):	MARPAT 131:305218					

GI

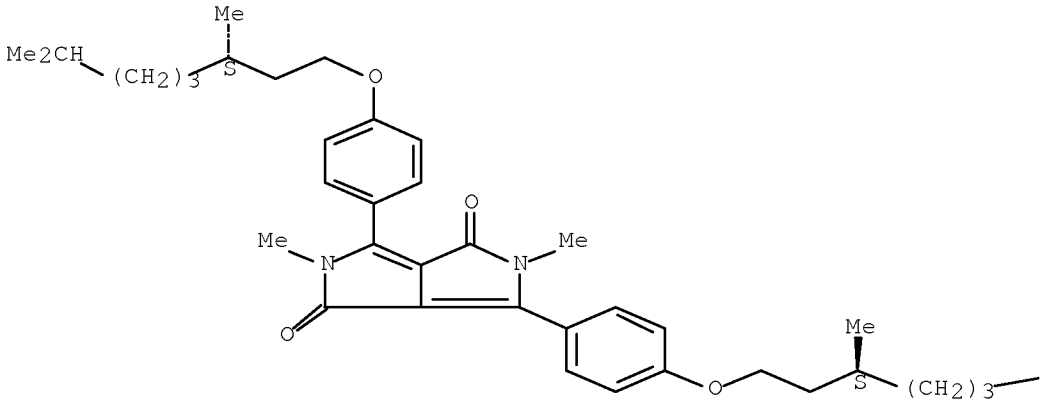


AB Diketopyrrolopyrrole liquid crystals for display devices are represented by the general formula I (L = Me, C10-18 alkyl, or II-V; B, D = C6-24 alkyl, VI, or VII; R1 = C4-18 alkyl with the proviso that when L is Me, at least one of B and D is C6-24 alkyl; R2 is hydrogen, C1-4 alkyl, C1-4 alkoxy, halogen, cyano, or nitro; R3-5 = hydrogen, OR6, SR6, SeR6, NHR6, NR6R7, or aryl with the proviso that at least one of R3-5 is not hydrogen; R6 = C7-37 alkyl, C7-37 alkylene, or C5-18 alkyl which is interrupted by 1-6 hetero atoms selected from the group consisting of O, S, and N; R7 = hydrogen, C1-12 alkyl, C2-12 alkylene, or C3-12 alkyl which is interrupted by 1-6 hetero atoms selected from the group consisting of O, S, and N).

IT 209339-00-4
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(electrooptical display devices with liquid crystal compns. containing diketopyrrolopyrroles and)
RN 209339-00-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[[(3S)-3,7-dimethyloctyl]oxy]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

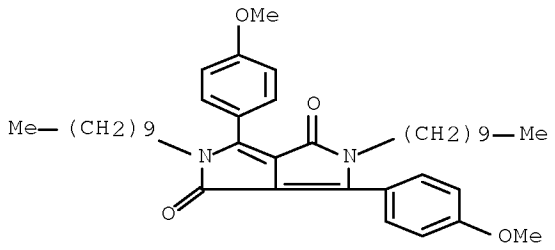
Absolute stereochemistry.

PAGE 1-A

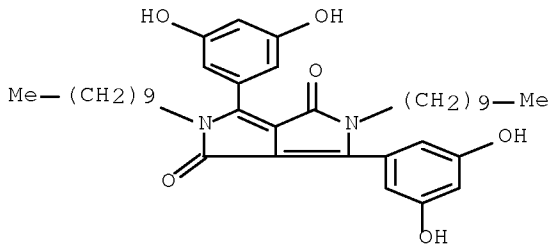


PAGE 1-B

IT 209338-98-7
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(electrooptical display devices with liquid crystal compns. containing diketopyrrolopyrroles. and)
RN 209338-98-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-2,5-dihydro-3,6-bis(4-methoxyphenyl)- (CA INDEX NAME)



IT 247079-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction in preparing diketopyrrolopyrrole liquid crystal for
electrooptical display devices)
RN 247079-16-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-3,6-bis(3,5-dihydroxyphenyl)-2,5-dihydro- (CA INDEX NAME)



IT 205104-10-5P 205104-11-6P 205104-12-7P
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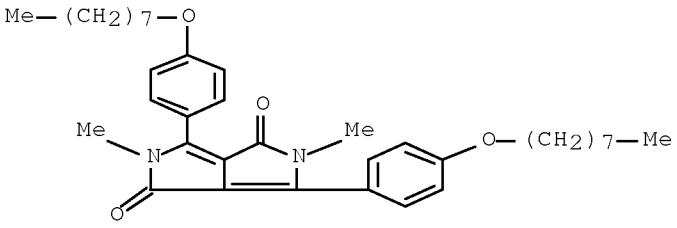
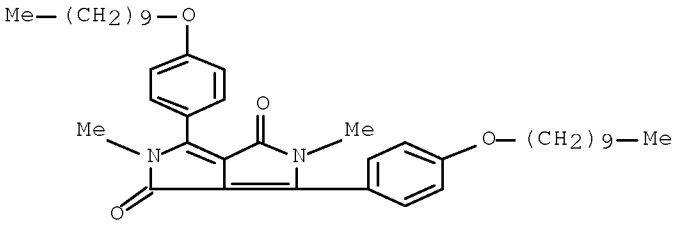
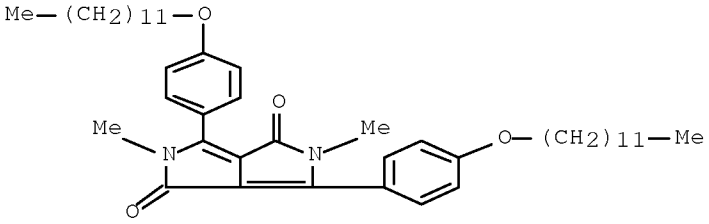
247079-22-7P 247079-23-8P 247079-25-0P
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use in preparing liquid crystal compns. for electrooptical display devices)
RN 205104-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]- (CA INDEX NAME)



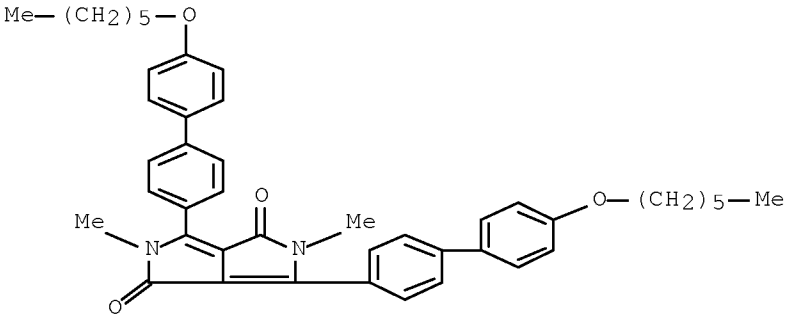
RN 205104-11-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



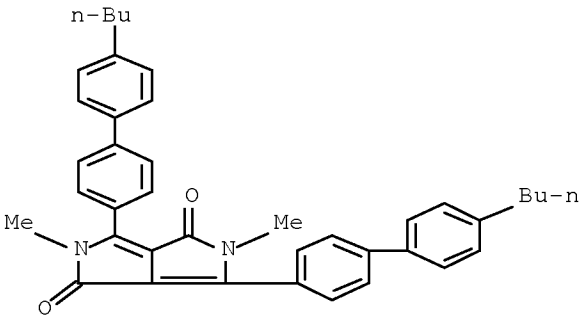
RN 205104-12-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



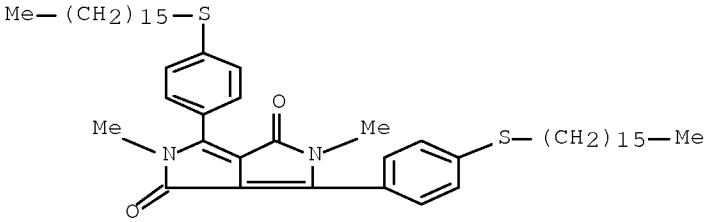
RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



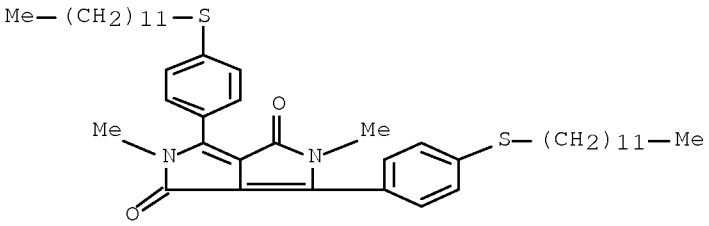
RN 205104-14-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4'-butyl[1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



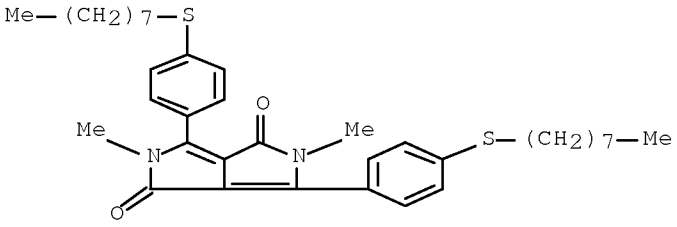
RN 209338-47-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(hexadecylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



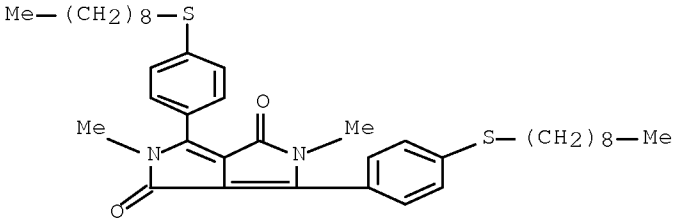
RN 209338-48-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



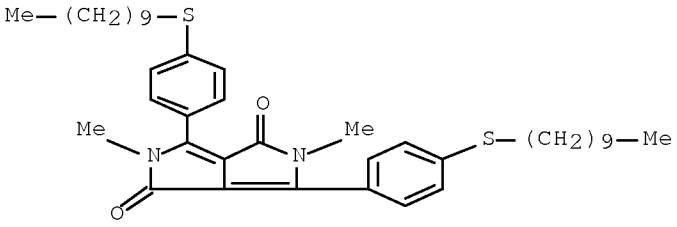
RN 209338-50-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octylthio)phenyl]- (CA INDEX NAME)



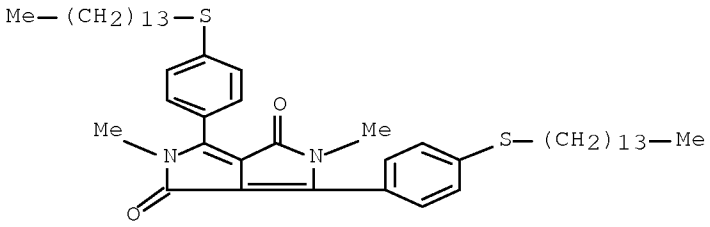
RN 209338-52-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(nonylthio)phenyl]- (CA INDEX NAME)



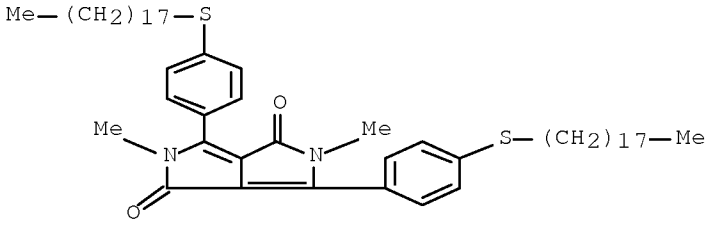
RN 209338-53-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



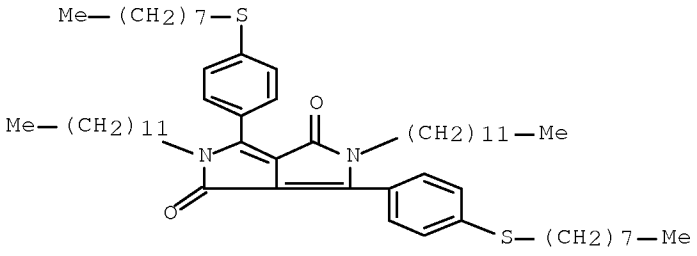
RN 209338-54-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(tetradecylthio)phenyl]- (CA INDEX NAME)



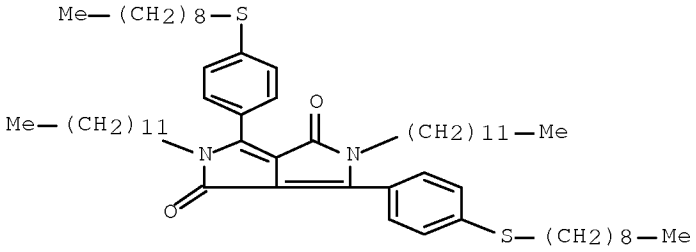
RN 209338-55-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octadecylthio)phenyl]- (CA INDEX NAME)



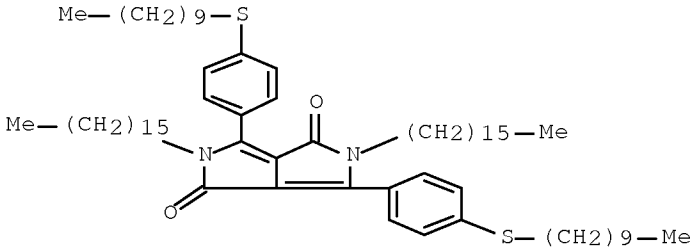
RN 209338-56-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(octylthio)phenyl]- (CA INDEX NAME)



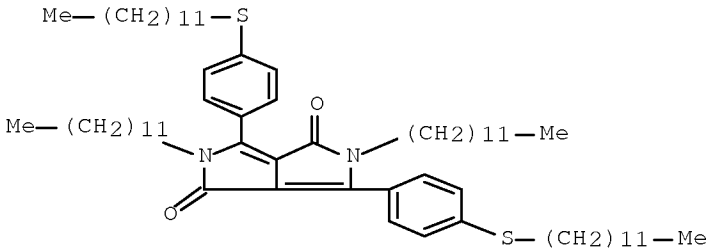
RN 209338-58-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(nonylthio)phenyl]- (CA INDEX NAME)



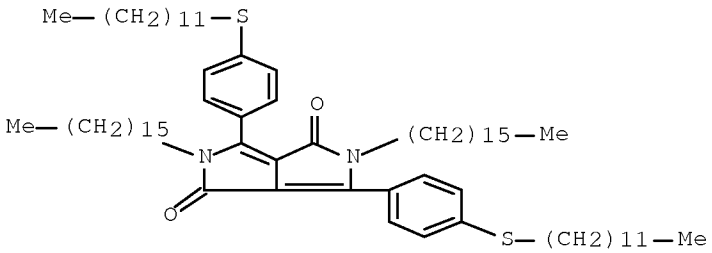
RN 209338-59-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decylthio)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



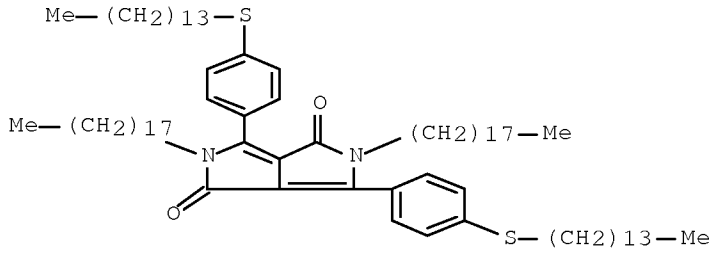
RN 209338-60-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydro- (CA INDEX NAME)



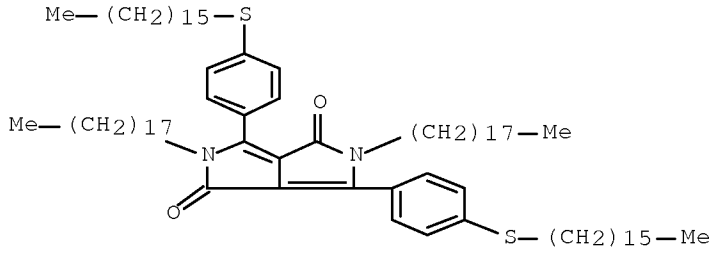
RN 209338-61-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecylthio)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



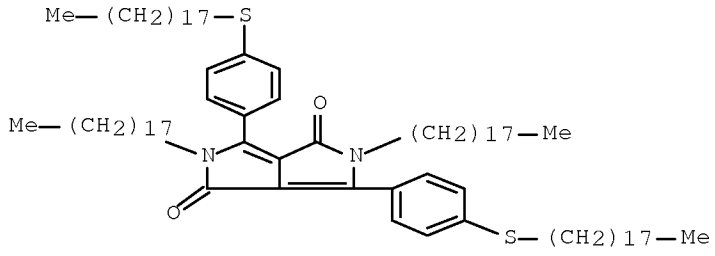
RN 209338-63-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dioctadecyl-3,6-bis[4-(tetradecylthio)phenyl]- (CA INDEX NAME)



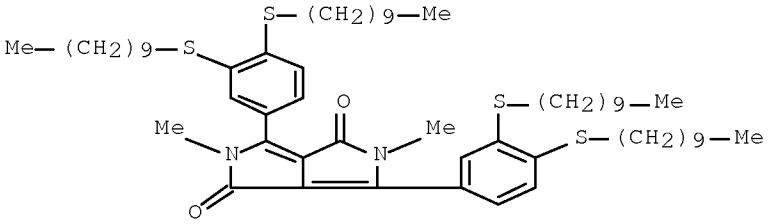
RN 209338-64-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(hexadecylthio)phenyl]-2,5-dihydro-2,5-dioctadecyl- (CA INDEX NAME)



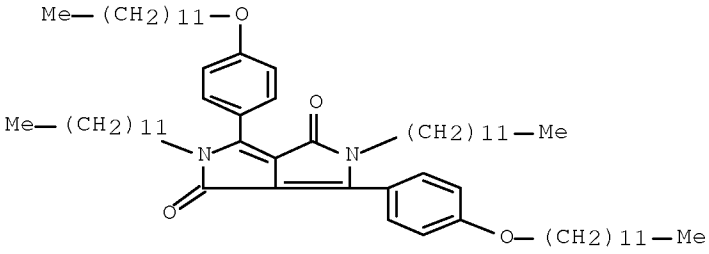
RN 209338-65-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dioctadecyl-3,6-bis[4-(octadecylthio)phenyl]- (CA INDEX NAME)



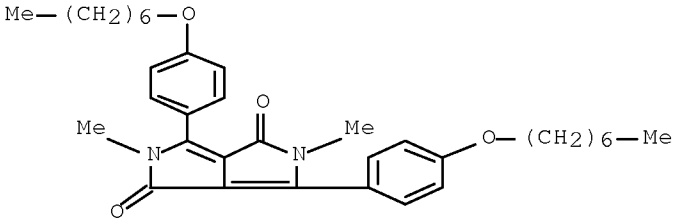
RN 209338-66-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,4-bis(decylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



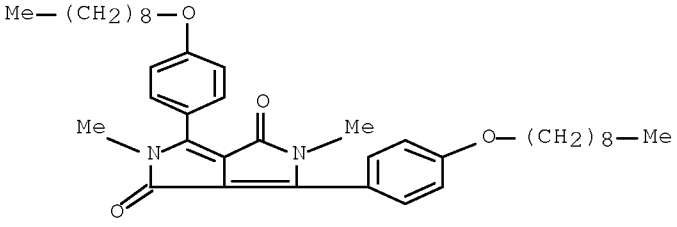
RN 209338-67-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihydro- (CA INDEX NAME)



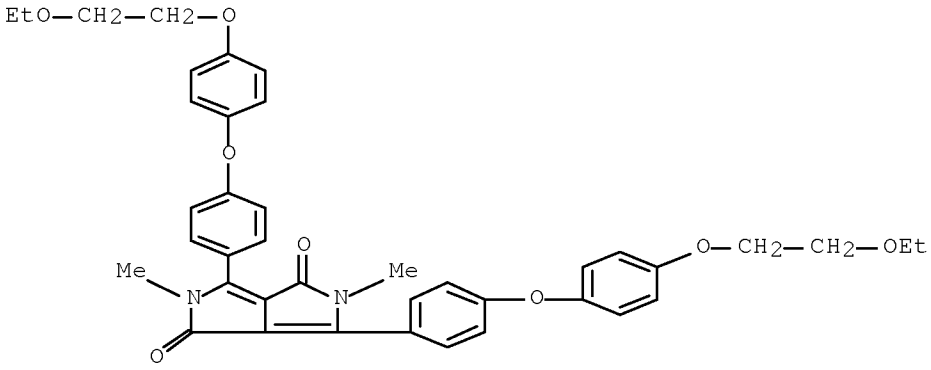
RN 209338-69-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(heptyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



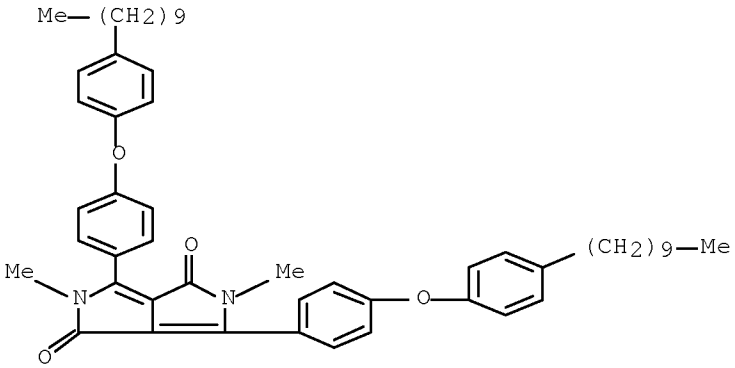
RN 209338-70-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



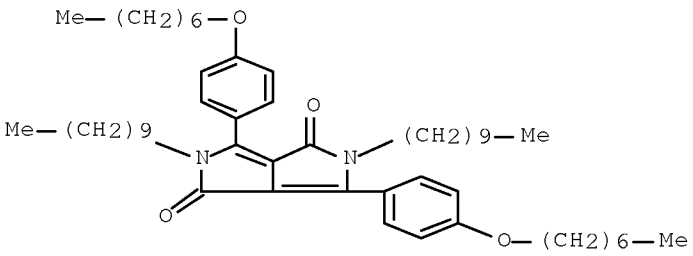
RN 209338-71-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[4-(2-ethoxyethoxy)phenoxy]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 209338-72-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(4-decylphenoxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

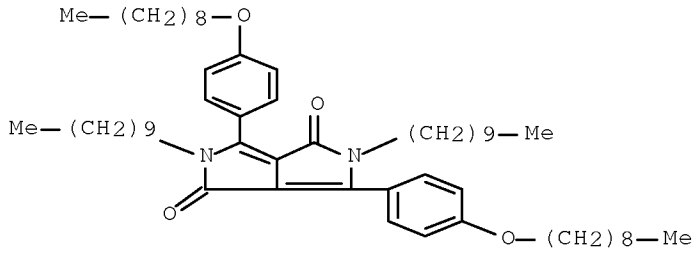


RN 209338-73-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-3,6-bis[4-(heptyloxy)phenyl]-2,5-dihydro- (CA INDEX NAME)

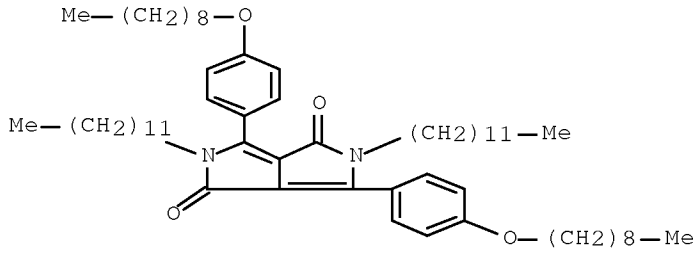


RN 209338-74-9 CAPLUS

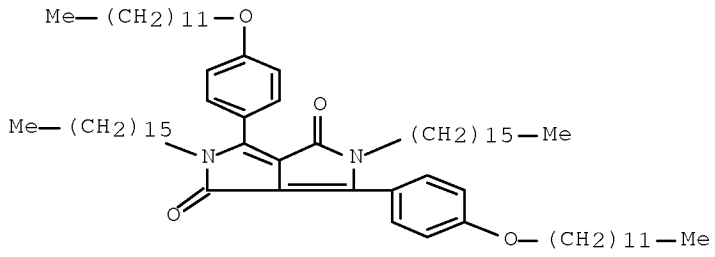
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-2,5-dihydro-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



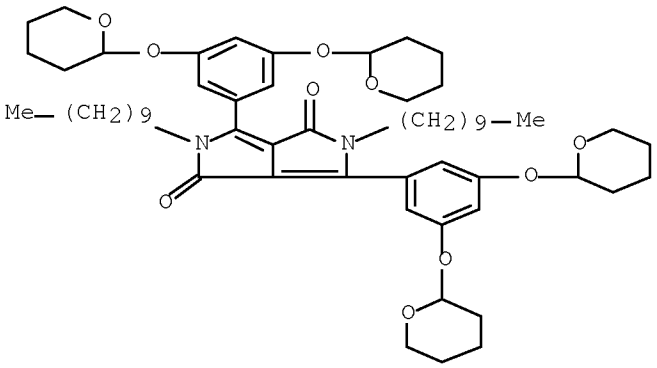
RN 209338-75-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



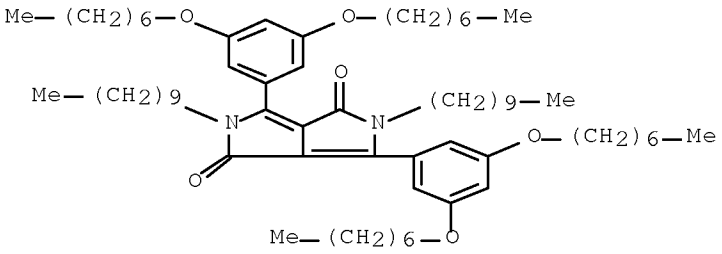
RN 209338-77-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



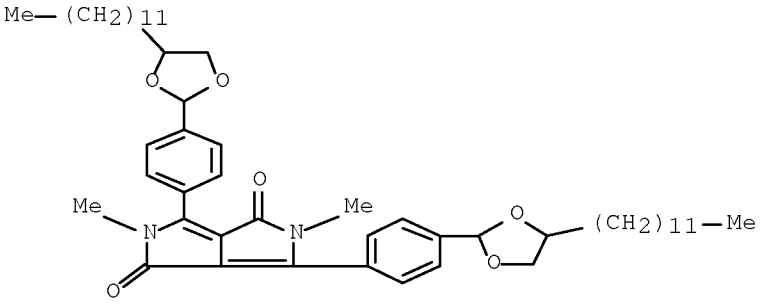
RN 209338-80-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-2,5-didecyl-2,5-dihydro- (CA INDEX NAME)



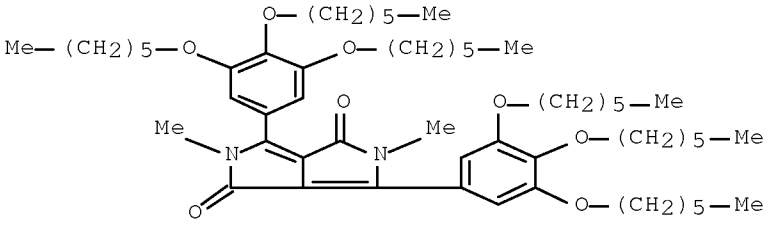
RN 209338-81-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis(heptyloxy)phenyl]-2,5-didecyl-2,5-dihydro- (CA INDEX NAME)



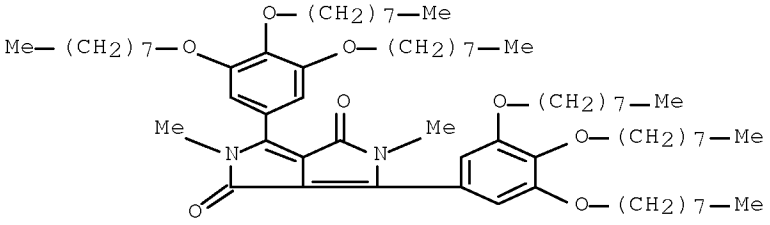
RN 209338-83-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(4-dodecyl-1,3-dioxolan-2-yl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



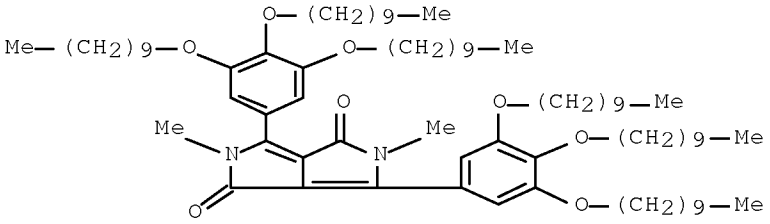
RN 209338-94-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(hexyloxy)phenyl]- (CA INDEX NAME)



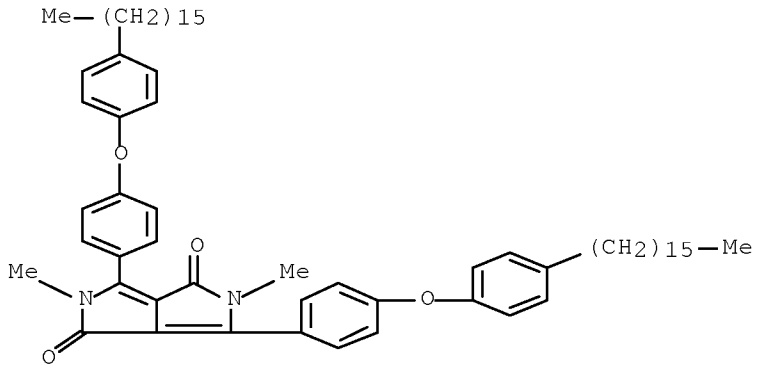
RN 209338-95-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(octyloxy)phenyl]- (CA INDEX NAME)



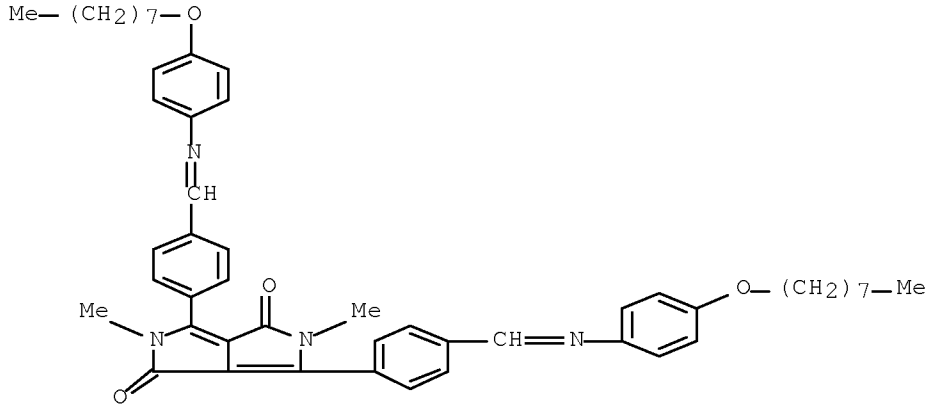
RN 209338-96-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(decyloxy)phenyl]- (CA INDEX NAME)



RN 247079-13-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(4-hexadecylphenoxy)phenyl]-2,5-dimethyl-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 247079-18-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-[[[4-(octyloxy)phenyl]imino]methyl]phenyl]- (CA INDEX NAME)



RN 247079-21-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trans-4-pentylcyclohexyl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

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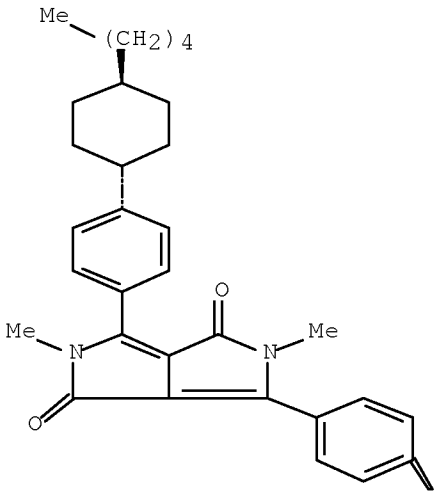

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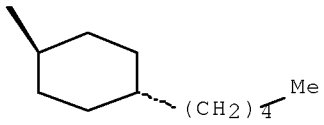

RN 247079-22-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4-(trans-4-pentylcyclohexyl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

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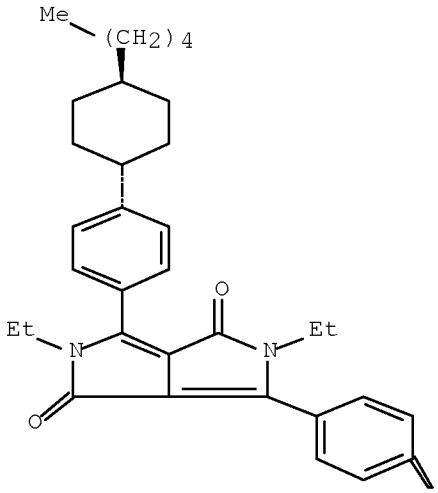

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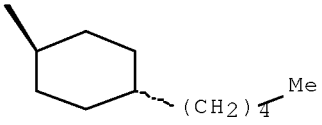
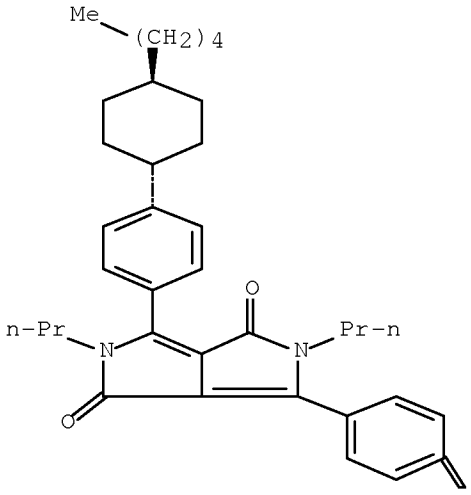


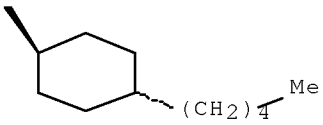
RN 247079-23-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-(trans-4-pentylcyclohexyl)phenyl]-2,5-dipropyl- (CA INDEX NAME)

Relative stereochemistry.

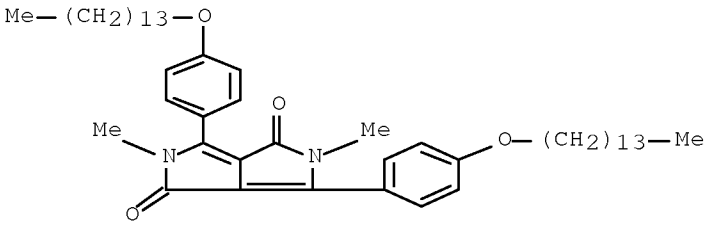
PAGE 1-A



PAGE 2-A



RN 247079-25-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(tetradecyloxy)phenyl]- (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:402443 CAPLUS Full-text
DOCUMENT NUMBER: 129:88080
TITLE: Diketopyrrolopyrrole liquid crystal for electrooptical display device
INVENTOR(S): Hao, Zhimin; Iqbal, Abul; Tebaldi, Nancy; Praefcke, Klaus
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE	
WO 9825927	A1	19980618	WO 1997-EP6641		19971128	<--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM						
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG						
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EP 944632	A1	19990929	EP 1997-953711		19971128	<--
EP 944632	B1	20010214				
R: CH, DE, FR, GB, IT, LI						
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TW 442556	B	20010623	TW 1997-86119577		19971223	<--
PRIORITY APPLN. INFO.:			CH 1996-3026	A	19961210	<--
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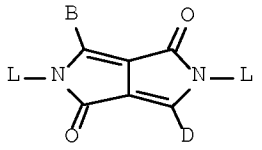
OTHER SOURCE(S): MARPAT 129:88080
GI



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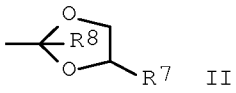

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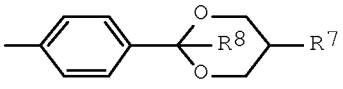

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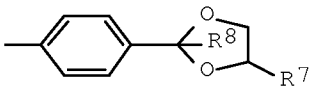

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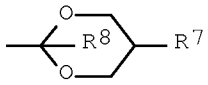


V

AB A compound of the formula I (B, D = C6-24 alkyl, C6H4R2, or 3,4,5-C6H2R3R4R5; L = CO-p-C6H4R1, p-C6H4R1, p-C6H4OR1, p-C6H4SR1, or C1-37 alkyl; R1 = C4-18 alkyl; R2 = H, C1-4 alkyl, C1-4 alkoxy, halogen, cyano, or nitro; R3-5 = H, OR6, SR6, SeR6, NHR6, NR6R7, II-V, p-C6H4R9, p-C6H4OR9, p-C6H4SR9, or CH=N-p-C6H4OR9, with the proviso that at least one of R3-5 is not H; R6 = C7-37 alkyl, C7-37 alkylene, or C5-18 alkyl which is interrupted by 1 to 6 hetero atoms selected from the group consisting of O, S and N; R7 = H or R9; R8 = H or C1-4 alkyl; and R9 = C1-12 alkyl, C2-12 alkylene, or C3-12 alkyl which is interrupted by 1 to 6 hetero atoms selected from the group consisting of O, S and N) is disclosed showing distinguished liquid crystal characteristics and suited for use in an electrooptical display device.

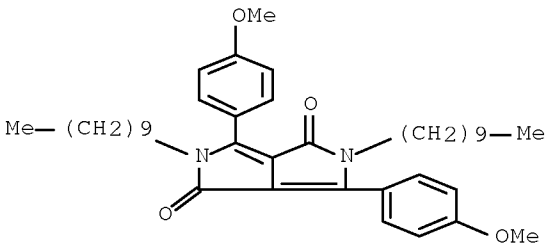
IT 209338-99-8 209339-01-5 209339-03-7
209339-04-8
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(liquid crystal composition for electrooptical display devices)

RN 209338-99-8 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-2,5-dihydro-3,6-bis(4-methoxyphenyl)-, mixt. with 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]pyrrolo[3,4-c]pyrrole-1,4-dione (9CI) (CA INDEX NAME)

CM 1

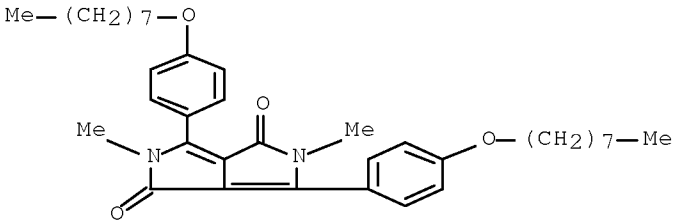
CRN 209338-98-7
CMF C40 H56 N2 O4



CM 2

CRN 205104-10-5

CMF C36 H48 N2 O4



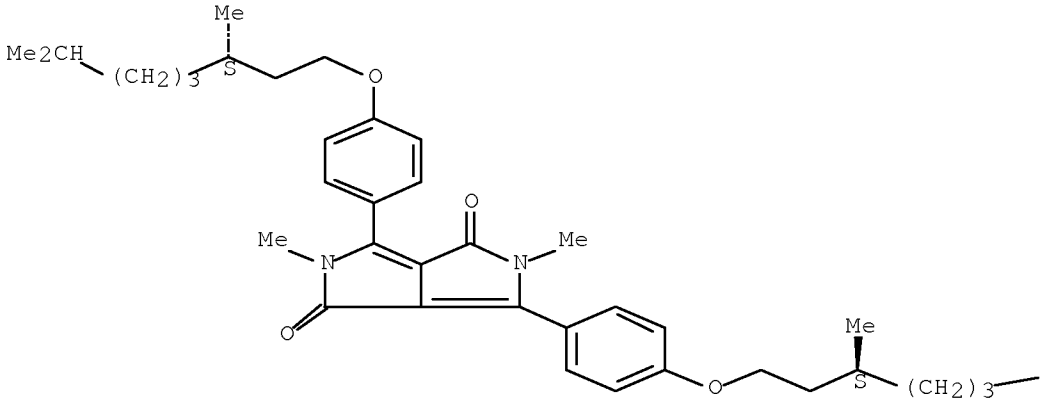
RN 209339-01-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[[(3S)-3,7-dimethyloctyl]oxy]phenyl]-2,5-dihydro-2,5-dimethyl-, mixt. with 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]pyrrolo[3,4-c]pyrrole-1,4-dione (9CI) (CA INDEX NAME)

CM 1

CRN 209339-00-4
CMF C40 H56 N2 O4

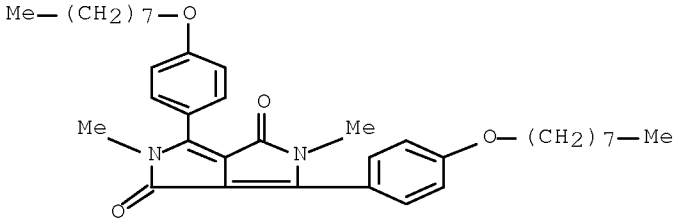
Absolute stereochemistry.

PAGE 1-A



CM 2

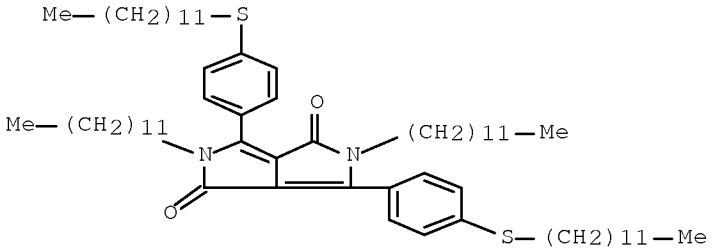
CRN 205104-10-5
CMF C36 H48 N2 O4



RN 209339-03-7 CAPLUS
CN Cyclohexanecarboxylic acid, 4-propyl-, 4-butoxyphenyl ester, trans-, mixt. with 2,5-didodecyl-3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (9CI) (CA INDEX NAME)

CM 1

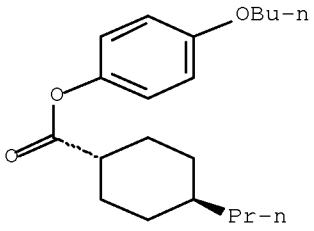
CRN 209338-60-3
CMF C66 H108 N2 O2 S2



CM 2

CRN 67589-41-7
CMF C20 H30 O3

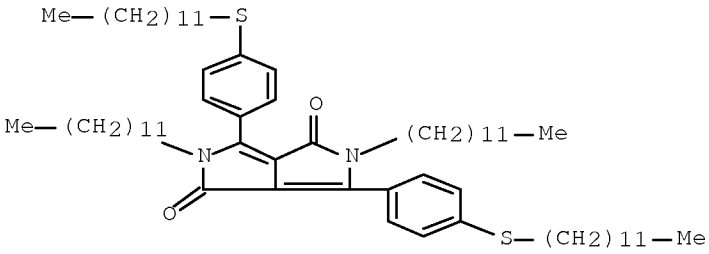
Relative stereochemistry.



RN 209339-04-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydro-, mixt. with [N(E)]-4-butyl-N-[(4-methoxyphenyl)methylene]benzenamine (9CI) (CA INDEX NAME)

CM 1

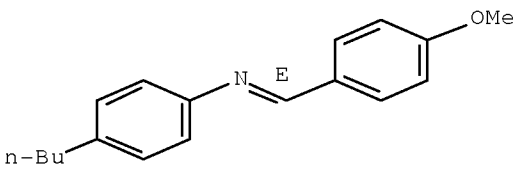
CRN 209338-60-3
CMF C66 H108 N2 O2 S2



CM 2

CRN 97402-82-9
CMF C18 H21 N O

Double bond geometry as shown.



IT 205104-10-5P 205104-11-6P 205104-12-7P
205104-13-8P 205104-14-9P 205104-15-0P

205104-16-1P 205104-17-2P 209338-47-6P
209338-48-7P 209338-50-1P 209338-52-3P
209338-53-4P 209338-54-5P 209338-55-6P
209338-56-7P 209338-58-9P 209338-59-0P
209338-60-3P 209338-61-4P 209338-63-6P
209338-64-7P 209338-65-8P 209338-66-9P
209338-67-0P 209338-69-2P 209338-70-5P
209338-71-6P 209338-72-7P 209338-73-8P
209338-74-9P 209338-75-0P 209338-77-2P
209338-78-3P 209338-79-4P 209338-80-7P
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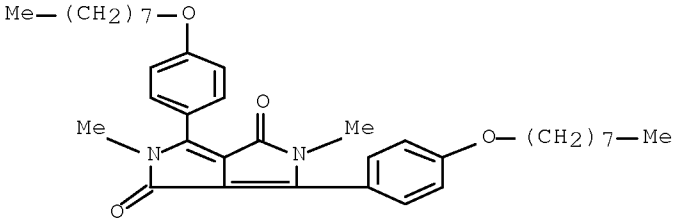
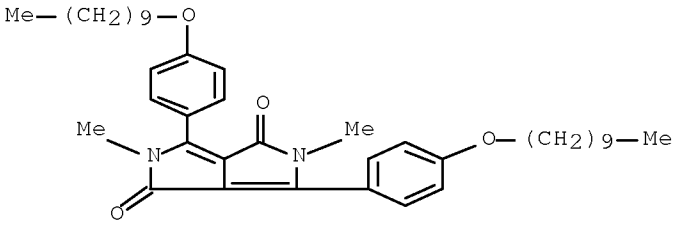
209338-94-3P 209338-95-4P 209338-96-5P
209338-97-6P
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use in liquid crystal compns. for electrooptical display devices)

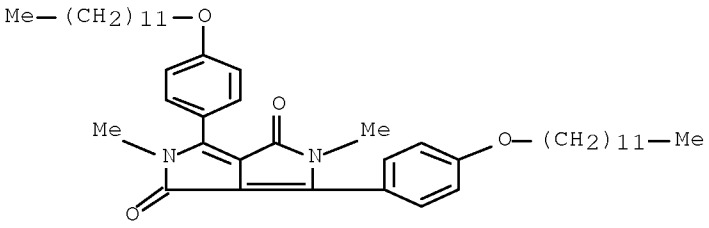
RN 205104-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]- (CA INDEX NAME)



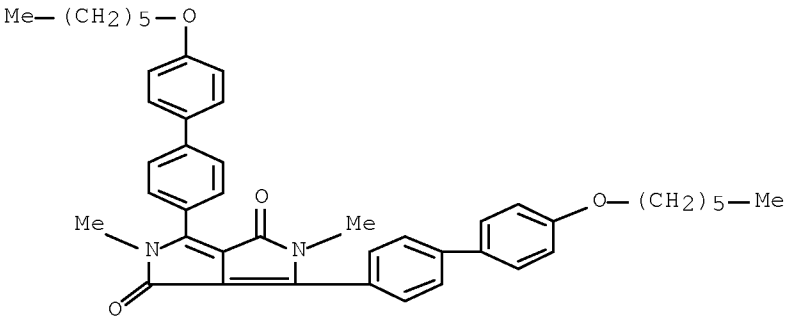
RN 205104-11-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



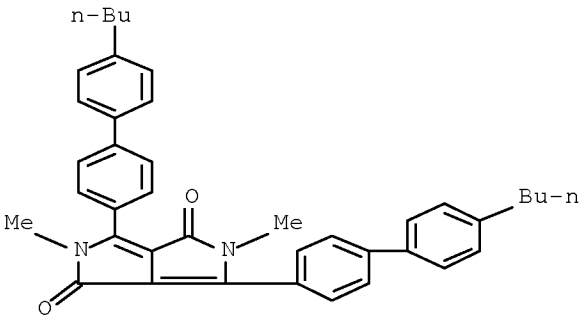
RN 205104-12-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



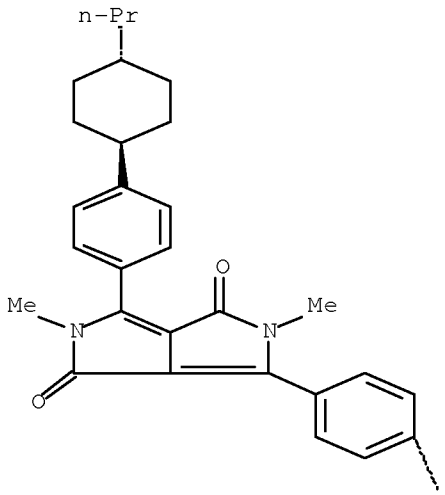
RN 205104-14-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4'-butyl[1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



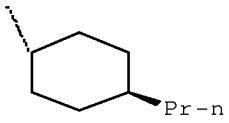
RN 205104-15-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trans-4-propylcyclohexyl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



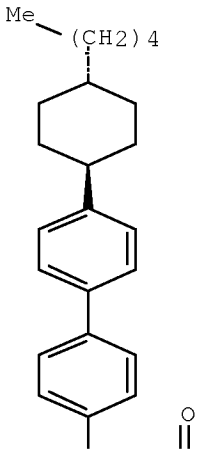
PAGE 2-A



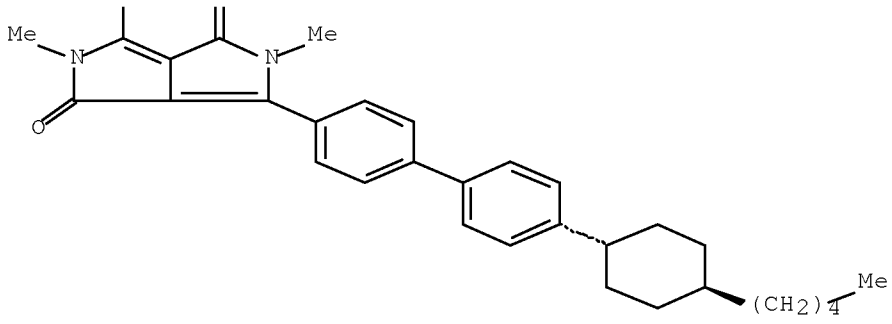
RN 205104-16-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



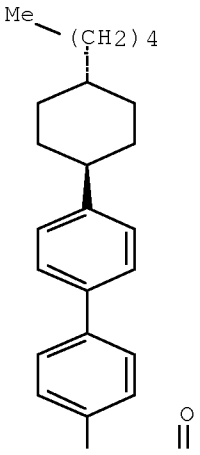
PAGE 2-A



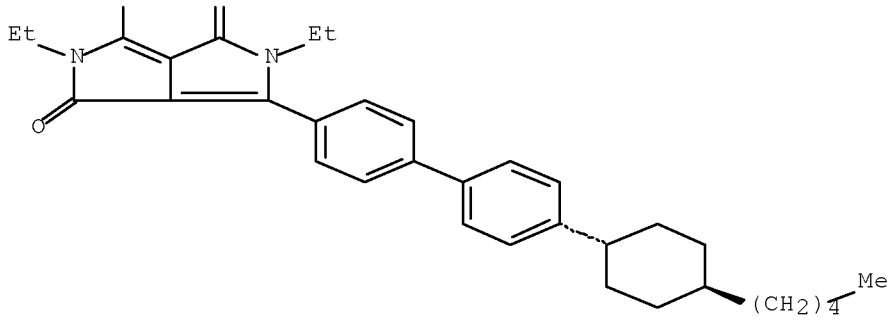
RN 205104-17-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

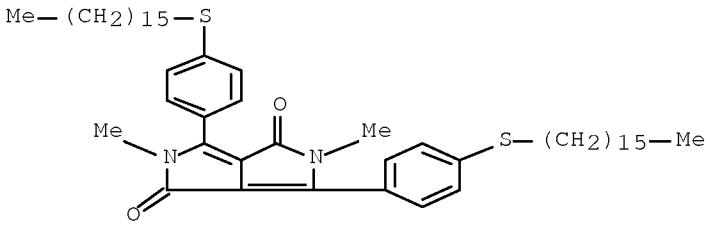
PAGE 1-A



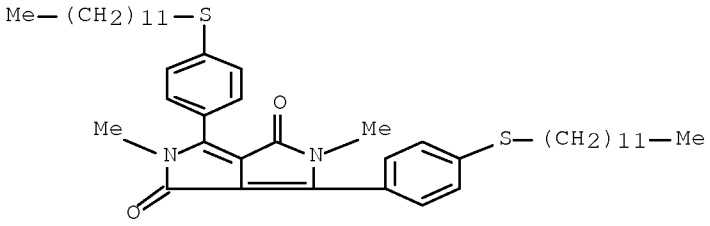
PAGE 2-A



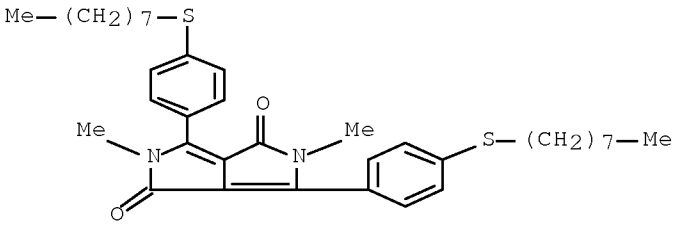
RN 209338-47-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(hexadecylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



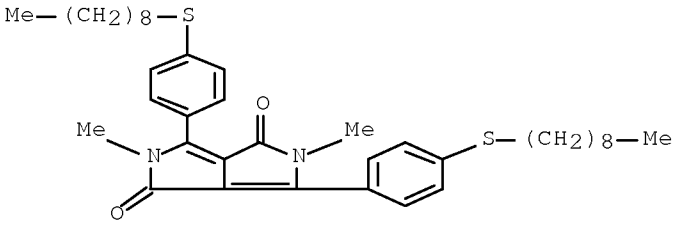
RN 209338-48-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



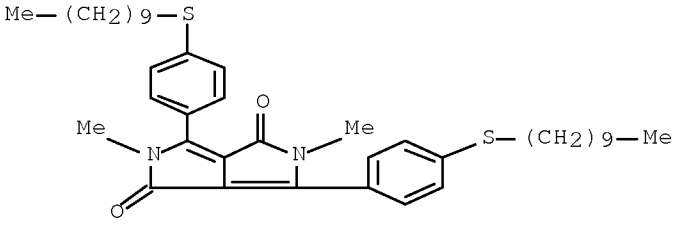
RN 209338-50-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octylthio)phenyl]- (CA INDEX NAME)



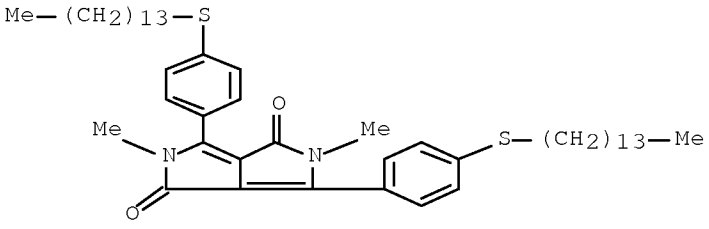
RN 209338-52-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(nonylthio)phenyl]- (CA INDEX NAME)



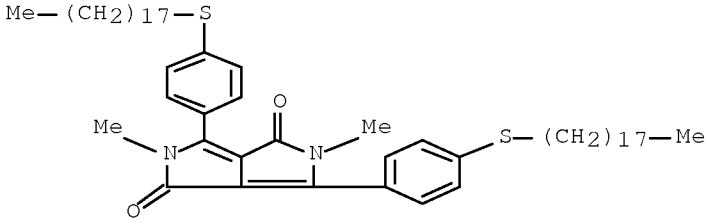
RN 209338-53-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



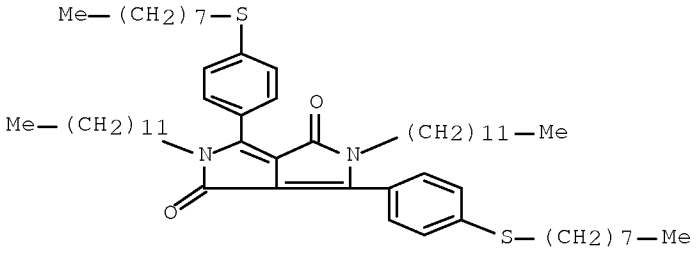
RN 209338-54-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(tetradecylthio)phenyl]- (CA INDEX NAME)



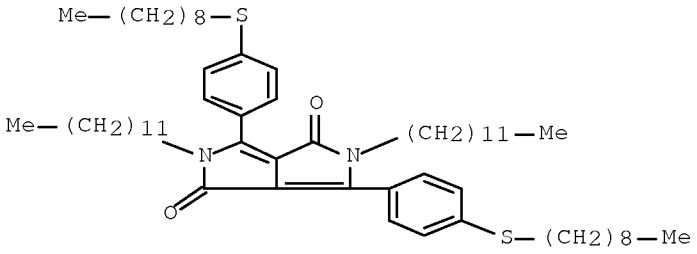
RN 209338-55-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octadecylthio)phenyl]- (CA INDEX NAME)



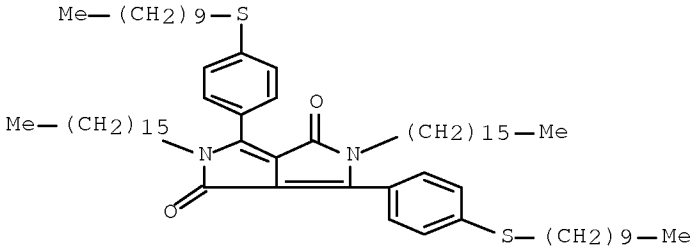
RN 209338-56-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(octylthio)phenyl]- (CA INDEX NAME)



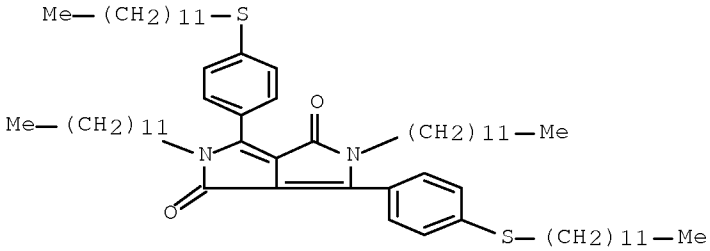
RN 209338-58-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(nonylthio)phenyl]- (CA INDEX NAME)



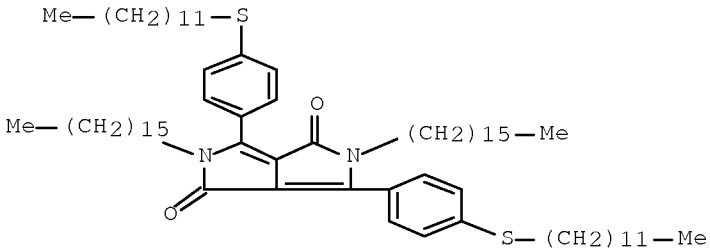
RN 209338-59-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decylthio)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



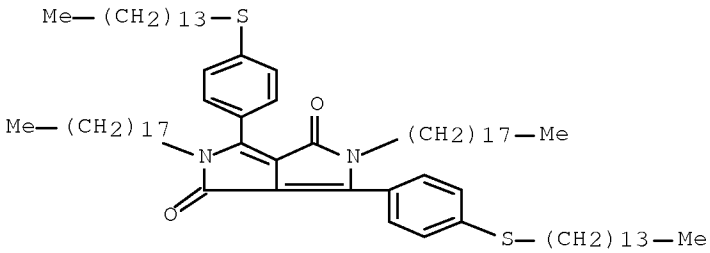
RN 209338-60-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-3,6-bis[4-(dodecylthio)phenyl]-2,5-dihydro- (CA INDEX NAME)



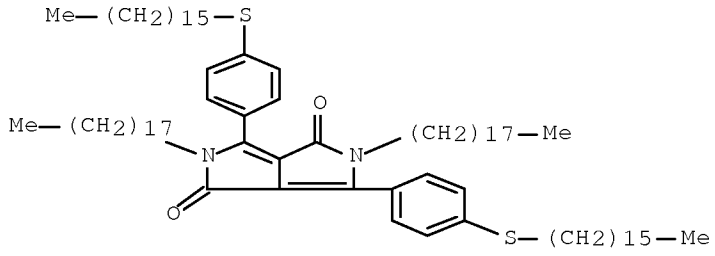
RN 209338-61-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecylthio)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



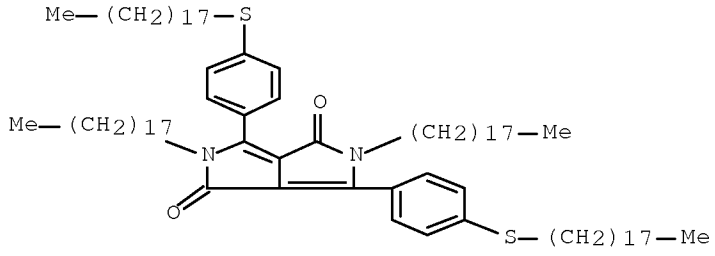
RN 209338-63-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dioctadecyl-3,6-bis[4-(tetradecylthio)phenyl]- (CA INDEX NAME)



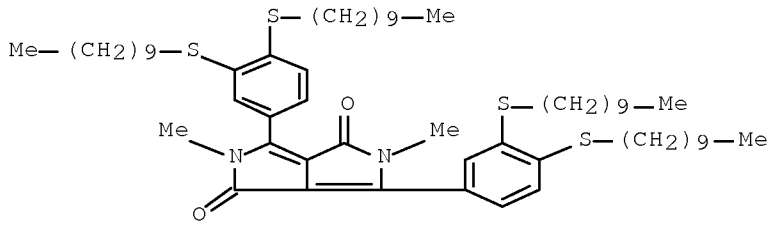
RN 209338-64-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(hexadecylthio)phenyl]-2,5-dihydro-2,5-dioctadecyl- (CA INDEX NAME)



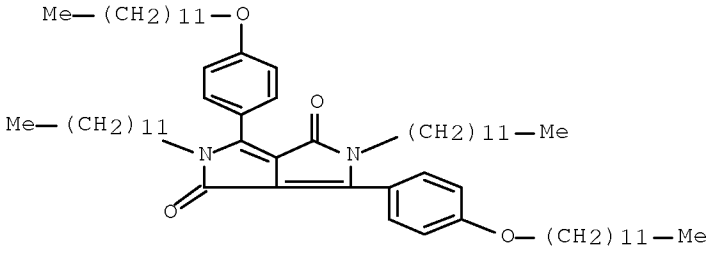
RN 209338-65-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dioctadecyl-3,6-bis[4-(octadecylthio)phenyl]- (CA INDEX NAME)



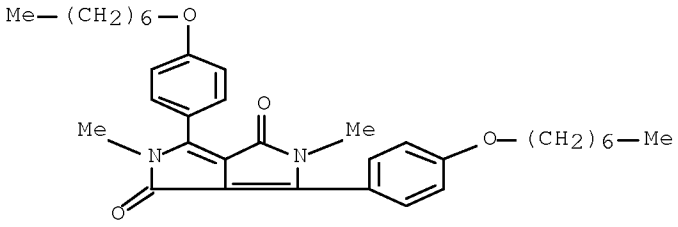
RN 209338-66-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,4-bis(decylthio)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



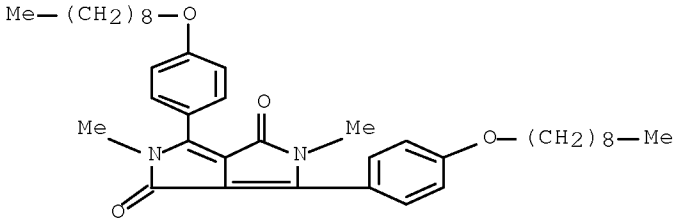
RN 209338-67-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihydro- (CA INDEX NAME)



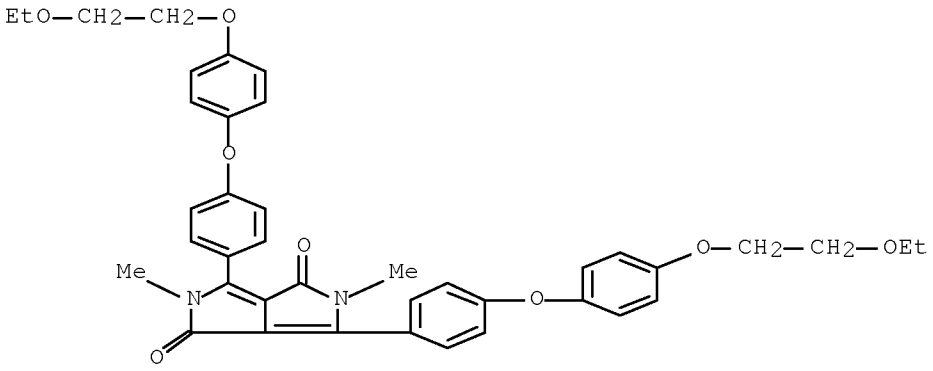
RN 209338-69-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(heptyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



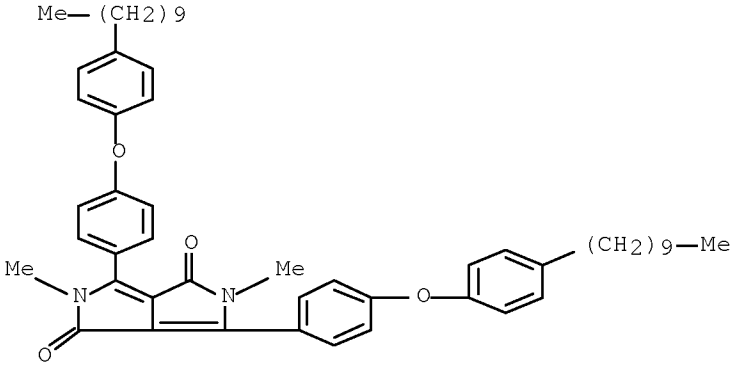
RN 209338-70-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



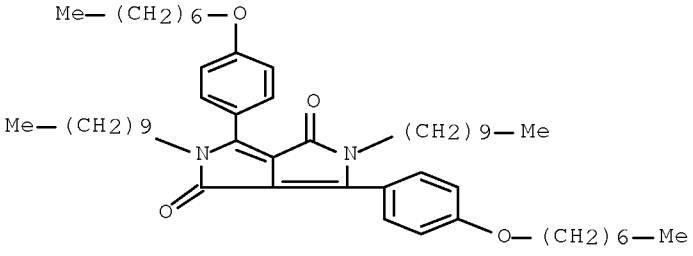
RN 209338-71-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-[4-(2-ethoxyethoxy)phenoxy]phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



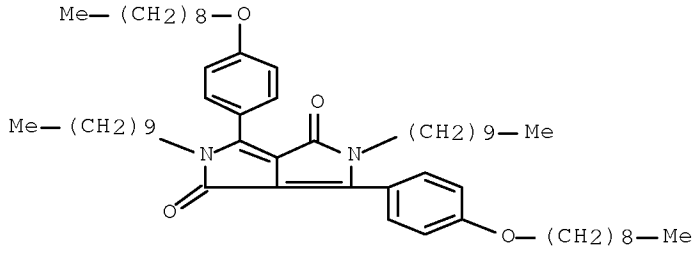
RN 209338-72-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(4-decylphenoxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



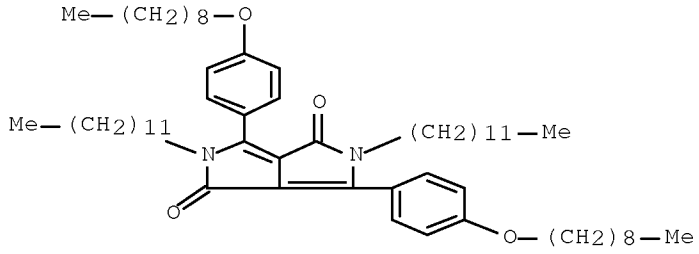
RN 209338-73-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-3,6-bis[4-(heptyloxy)phenyl]-2,5-dihydro- (CA INDEX NAME)



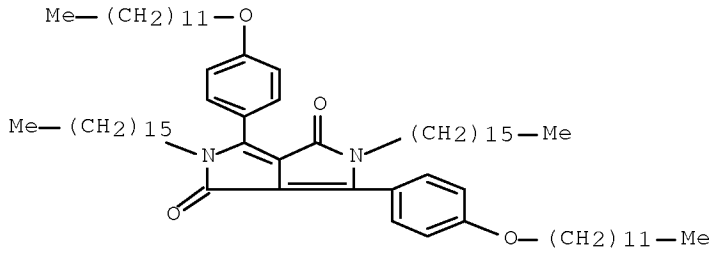
RN 209338-74-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-2,5-dihydro-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



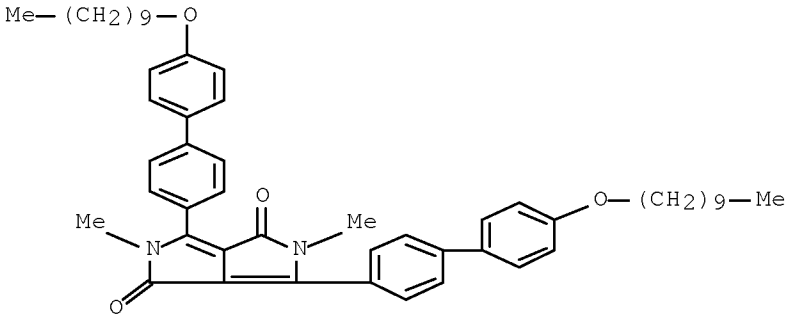
RN 209338-75-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didodecyl-2,5-dihydro-3,6-bis[4-(nonyloxy)phenyl]- (CA INDEX NAME)



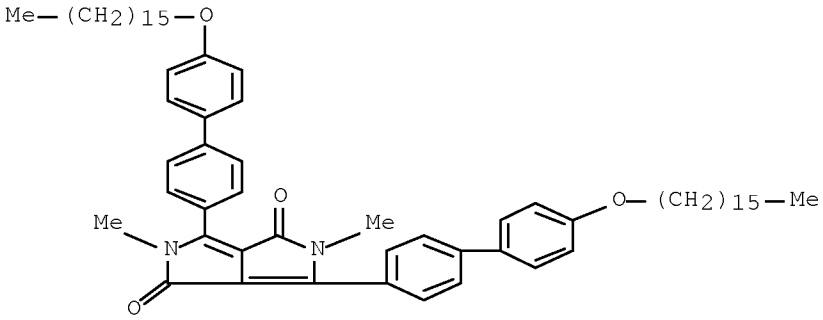
RN 209338-77-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihexadecyl-2,5-dihydro- (CA INDEX NAME)



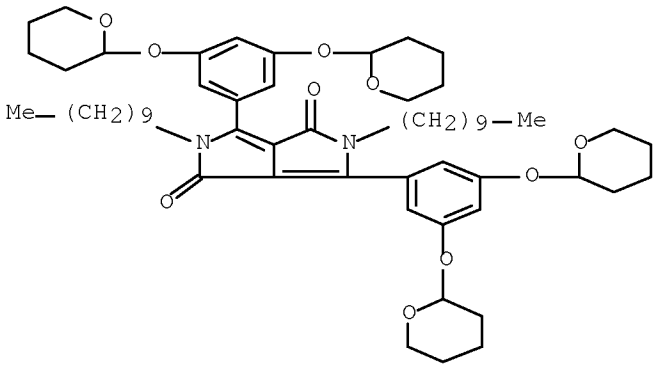
RN 209338-78-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(decyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



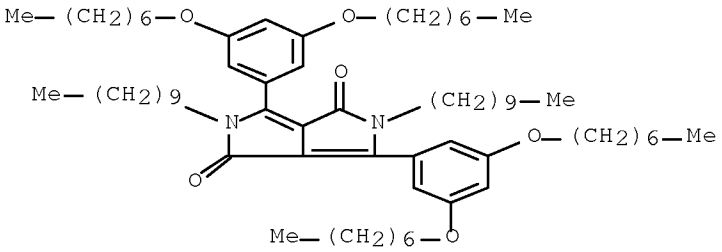
RN 209338-79-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexadecyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 209338-80-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis[(tetrahydro-2H-pyran-2-yl)oxy]phenyl]-2,5-didecyl-2,5-dihydro- (CA INDEX NAME)



RN 209338-81-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[3,5-bis(heptyloxy)phenyl]-2,5-didecyl-2,5-dihydro- (CA INDEX NAME)



RN 209338-82-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-[(E)-[[4-(octyloxy)phenyl]imino]methyl]phenyl]- (CA INDEX NAME)

Double bond geometry as shown.

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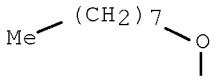

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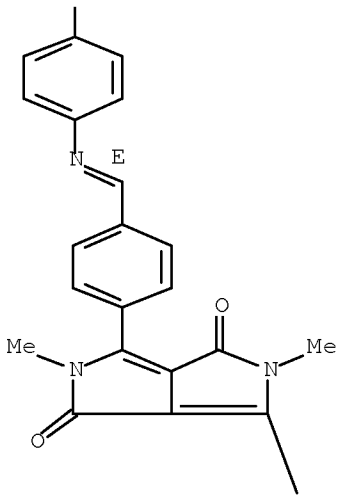
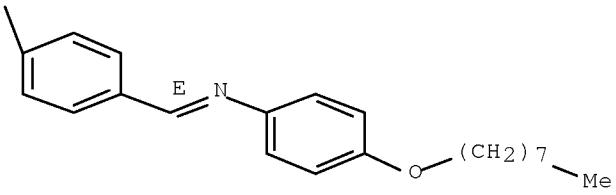
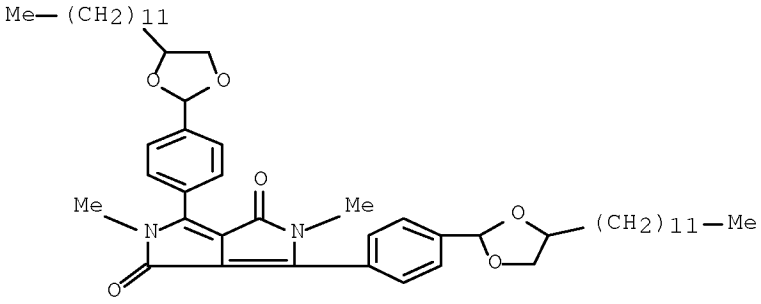


PAGE 3-A



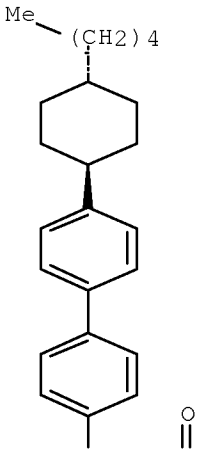
RN 209338-83-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(4-dodecyl-1,3-dioxolan-2-yl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



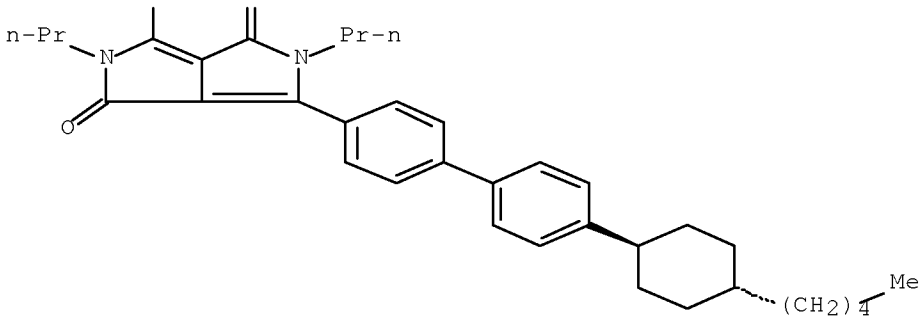
RN 209338-91-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]-2,5-dipropyl- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



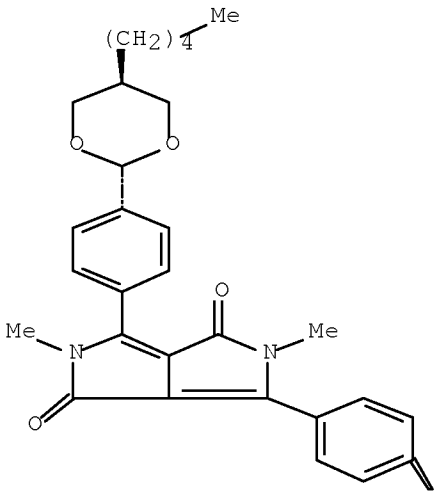
PAGE 2-A



RN 209338-92-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trans-5-pentyl-1,3-dioxan-2-yl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



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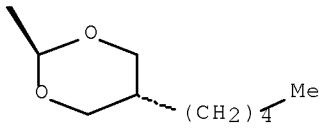
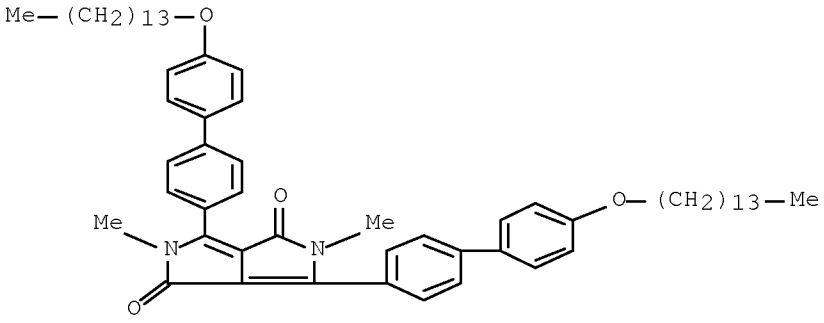
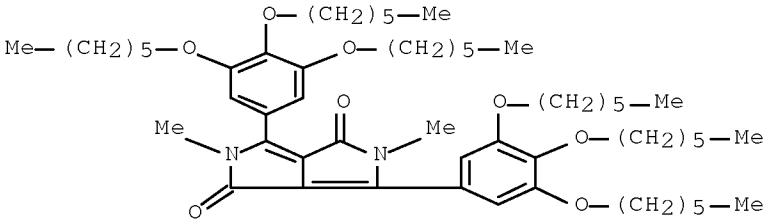


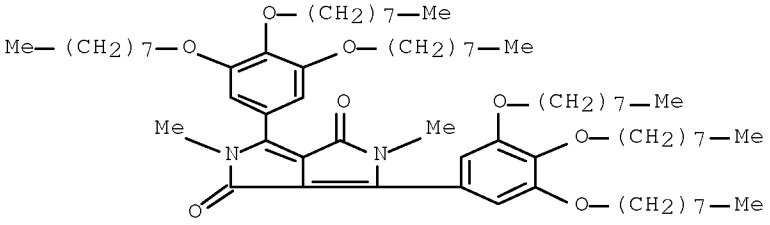
RN 209338-93-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4'-(tetradecyloxy)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)



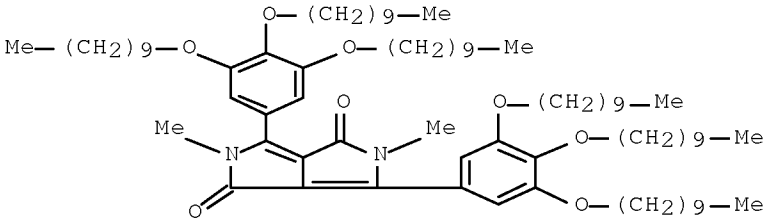
RN 209338-94-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(hexyloxy)phenyl]- (CA INDEX NAME)



RN 209338-95-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(octyloxy)phenyl]- (CA INDEX NAME)



RN 209338-96-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[3,4,5-tris(decyloxy)phenyl]- (CA INDEX NAME)



RN 209338-97-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]-, mixt. with 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]pyrrolo[3,4-c]pyrrole-1,4-dione (9CI) (CA INDEX NAME)

CM 1

CRN 205104-17-2
CMF C56 H68 N2 O2

Relative stereochemistry.

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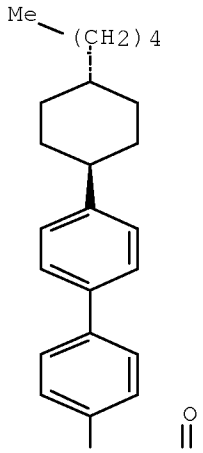

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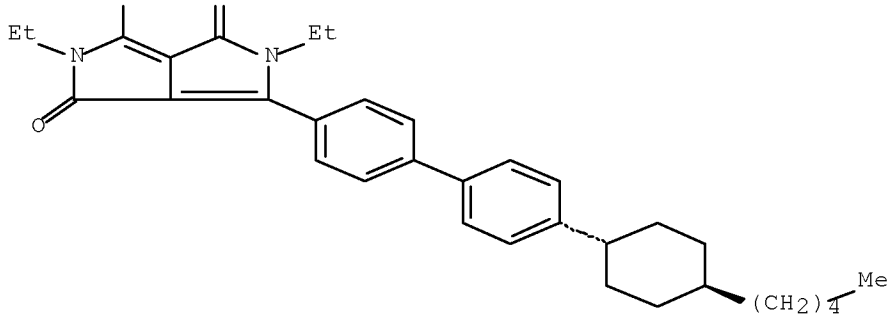

CM 2

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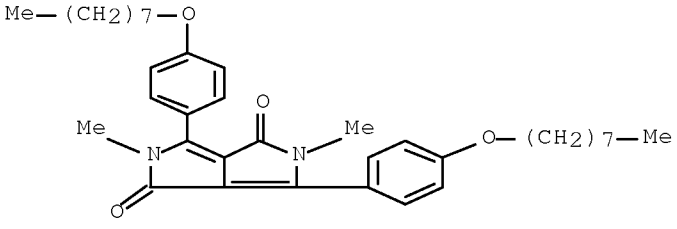


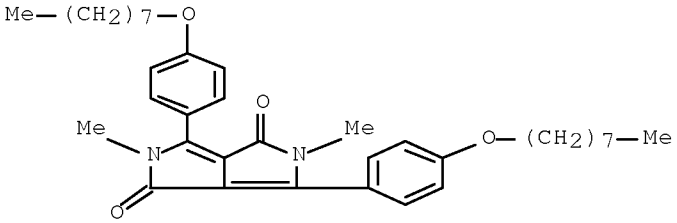
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:219038 CAPLUS Full-text
DOCUMENT NUMBER: 128:264287
TITLE: Liquid crystal compounds. 110. 1,4-Diketopyrrolo[3,4-c]pyrrole: a novel core system for liquid crystals
AUTHOR(S): Blunk, D.; Praefcke, K.; Jachmann, M.; Horn, M.
CORPORATE SOURCE: Institute of Organic Chemistry, Technische Universitat Berlin, Berlin, D-10623, Germany
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1998), 3319(Liquid Crystals: Chemistry and Structure), 20-23
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

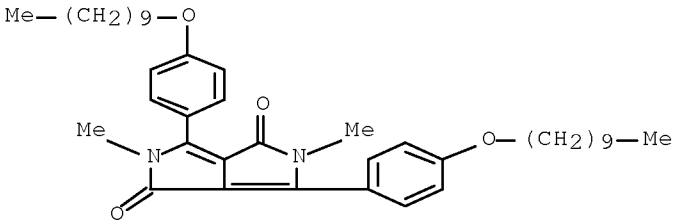
AB The chromophoric biheterocycle 2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (DPPD) as a widely variable basic core structure was introduced into liquid crystal research. The 1st eight calamitic examples of such thermomesomorphic derivs. are presented and discussed.

IT 205104-10-5 205104-11-6 205104-13-8
205104-14-9 205104-15-0 205104-16-1
205104-17-2
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(liquid crystal properties of)

RN 205104-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]- (CA INDEX NAME)

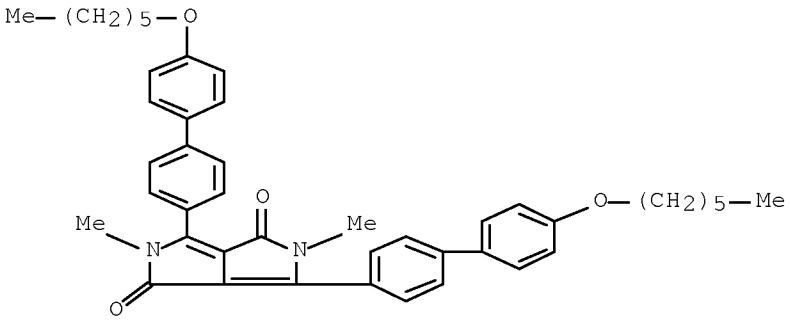


RN 205104-11-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

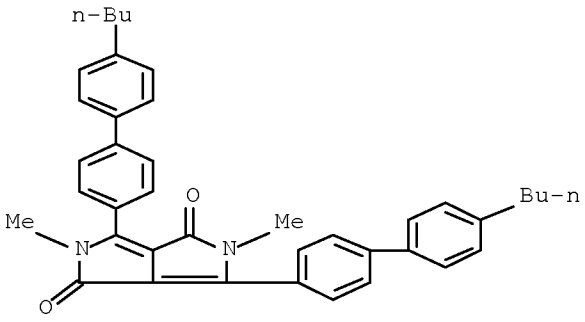


RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-

yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



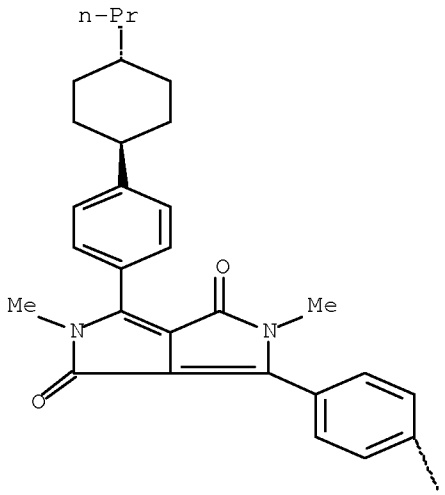
RN 205104-14-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4'-butyl[1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



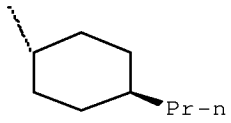
RN 205104-15-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trans-4-propylcyclohexyl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



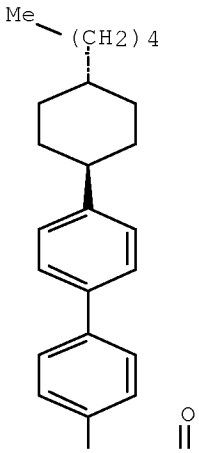
PAGE 2-A



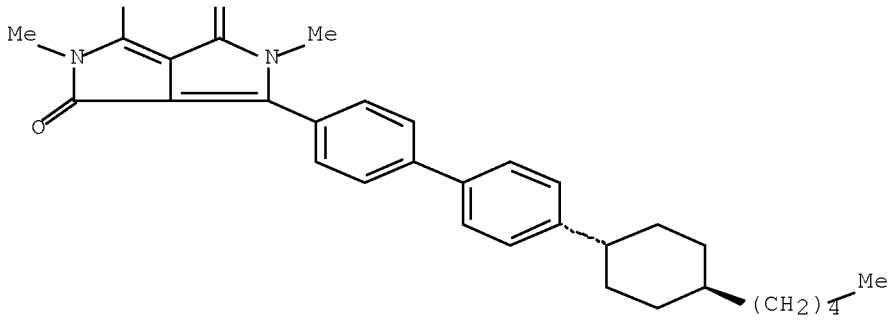
RN 205104-16-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



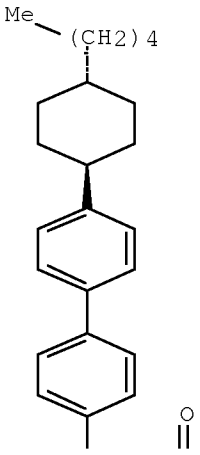
PAGE 2-A

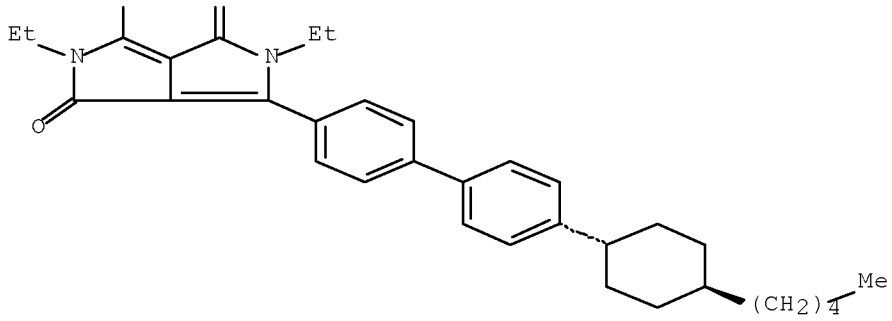


RN 205104-17-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A





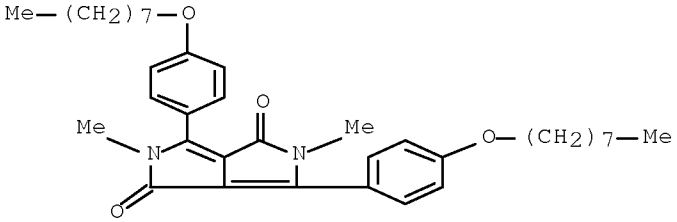
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:166496 CAPLUS Full-text
DOCUMENT NUMBER: 128:250993
TITLE: Novel family of liquid crystals based on a known biheterocyclic pigment material: mesomorphic derivatives of 2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione
AUTHOR(S): Praefcke, Klaus; Jachmann, Markus; Blunk, Dirk; Horn, Matthias
CORPORATE SOURCE: Institute of Organic Chemistry, Technische Universitaet Berlin, Berlin, D-10623, Germany
SOURCE: Liquid Crystals (1998), 24(1), 153-156
CODEN: LICRE6; ISSN: 0267-8292
PUBLISHER: Taylor & Francis Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

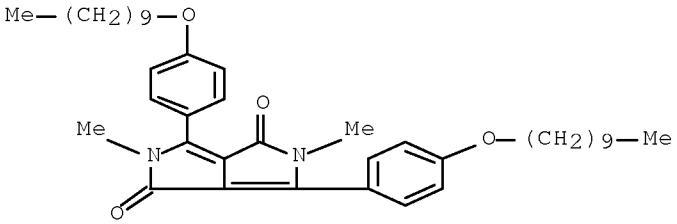
AB The chromophoric biheterocycle 2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (DPPD) as a widely variable basic core structure was introduced into liquid crystal research and the 1st eight calamitic examples of thermomesomorphic derivs. are presented and discussed.

IT 205104-10-5P 205104-11-6P 205104-12-7P
205104-13-8P 205104-14-9P 205104-15-0P
205104-16-1P 205104-17-2P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and liquid crystal properties of)

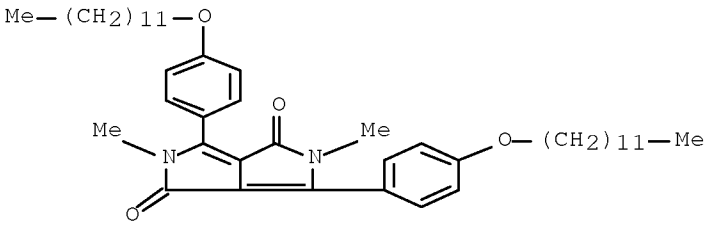
RN 205104-10-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(octyloxy)phenyl]- (CA INDEX NAME)



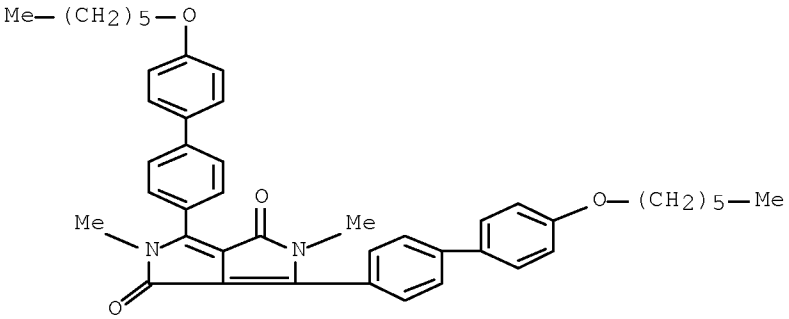
RN 205104-11-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(decyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



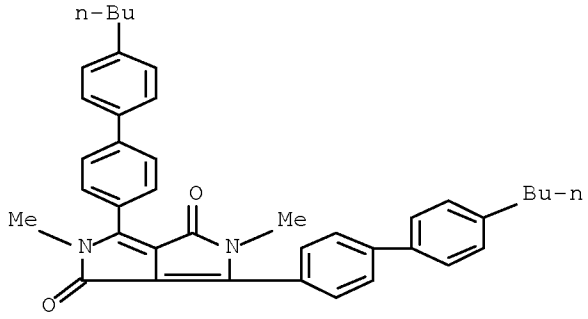
RN 205104-12-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dodecyloxy)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 205104-13-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4'-(hexyloxy)[1,1'-biphenyl]-4-yl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



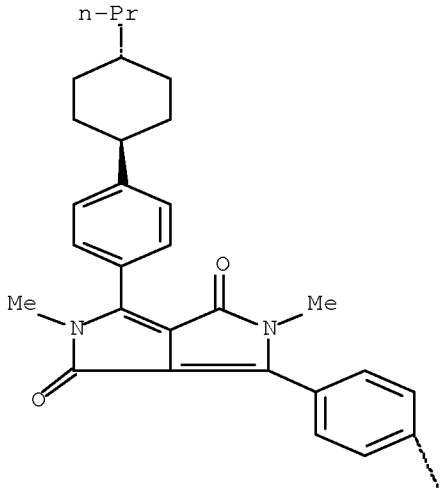
RN 205104-14-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4'-butyl[1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



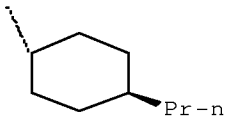
RN 205104-15-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4-(trans-4-propylcyclohexyl)phenyl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



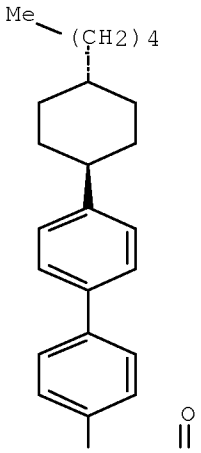
PAGE 2-A



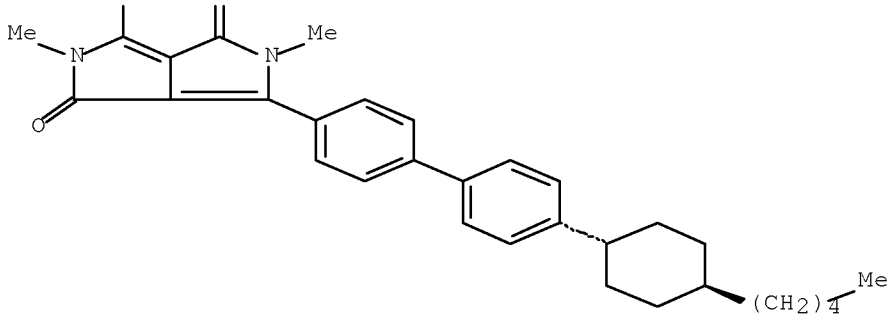
RN 205104-16-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



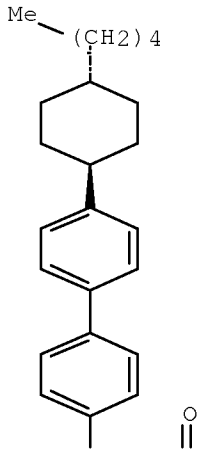
PAGE 2-A



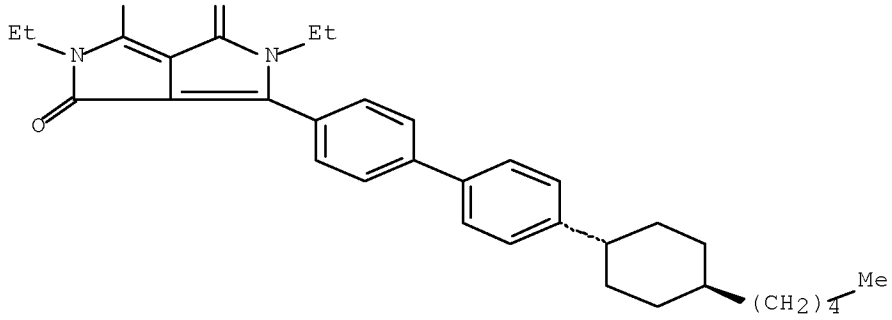
RN 205104-17-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]- (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

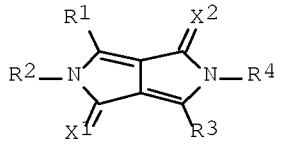


REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:171881 CAPLUS Full-text
DOCUMENT NUMBER: 126:178818
TITLE: Organic electroluminescent device and pyrrolo[3,4-c]pyrrol-based electron-transporting material for it
INVENTOR(S): Enokida, Toshio; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09003448	A	19970107	JP 1995-157300	19950623 <--

JP 3704748 B2 20051012
PRIORITY APPLN. INFO.: JP 1995-157300 19950623 <--
OTHER SOURCE(S): MARPAT 126:178818
GI

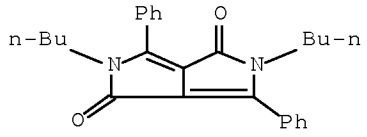


I

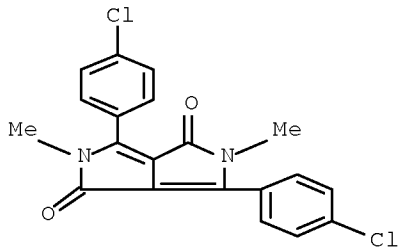
AB The material is I [R1-4 = H, (un)substituted aliphatic (cyclic) group, (un)substituted aromatic ring, (un)substituted heterocycle; X1, X2 = O, S, dicyanomethylene]. The device, including a pair of electrode retaining an emitting layer (and an electron-injecting layer) between them, contains I in the emitting layer (or in the electron-injecting layer). The device shows high luminance and long service life.

IT 96159-01-2 96159-14-7 96159-17-0
128318-54-7 186967-25-9
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(electron-transporting material; organic electroluminescent device and pyrrolopyrrol-based electron-transporting material for it)

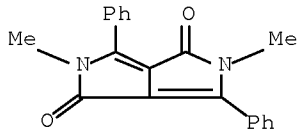
RN 96159-01-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



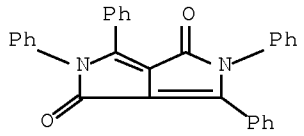
RN 96159-14-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



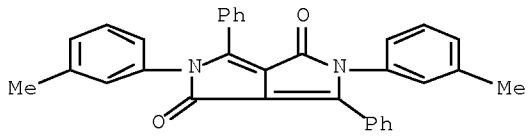
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



RN 128318-54-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,3,5,6-tetraphenyl- (CA INDEX NAME)



RN 186967-25-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-bis(3-methylphenyl)-3,6-diphenyl- (CA INDEX NAME)



L66 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:354052 CAPLUS Full-text
DOCUMENT NUMBER: 125:13291
TITLE: Process for producing N-methylated organic pigments
INVENTOR(S): Zambounis, John; Bize, Aline
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9608537	A1	19960321	WO 1995-EP3462	19950902 <--

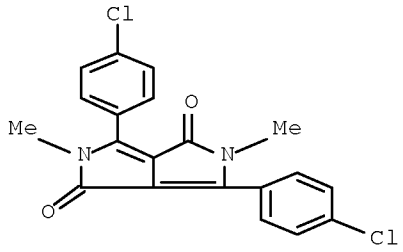
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9535625 A 19960329 AU 1995-35625 19950902 <--
PRIORITY APPLN. INFO.: GB 1994-18499 A 19940914 <--
WO 1995-EP3462 W 19950902 <--
OTHER SOURCE(S): MARPAT 125:13291

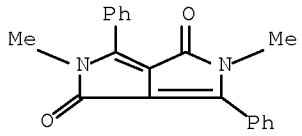
AB The process is for producing an organic pigment AHxMey (A = residue of an organic pigment containing x + y cyclic or open NH group; x + y = 1-4 integer; x = 0-4; y = 1-4; H and Me are bound to the above mentioned N) by reacting an organic pigment AHx+y with di-Me carbonate in the presence of a base with or without a solvent. This process is an environmentally safe process and has low production cost.

IT 96159-14-7P 96159-17-0P 107680-85-3P
177580-90-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for producing N-methylated organic pigments using di-Me carbonate as methylation agents)

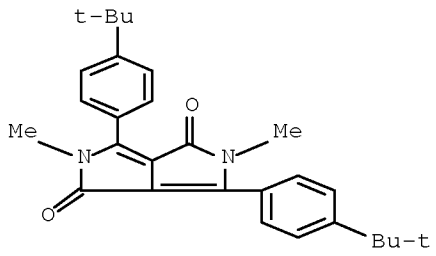
RN 96159-14-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



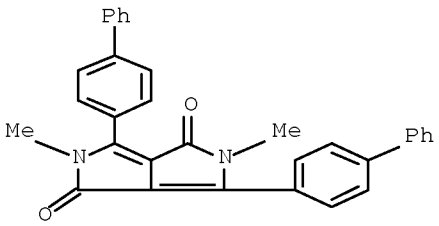
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



RN 107680-85-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



RN 177580-90-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



L66 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:673499 CAPLUS Full-text
DOCUMENT NUMBER: 119:273499
TITLE: Process for the manufacture of pigments, especially fluorescent pigments
INVENTOR(S): Marcq, Michel Jean Marcq; Tanner, Martin
PATENT ASSIGNEE(S): Societe Nouvelle de Chimie Industrielle S. A., Fr.; Ciba-Geigy A.-G.
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

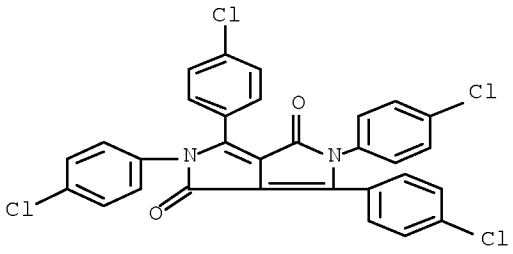
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 542669	A1	19930519	EP 1992-810747	19921005 <--
EP 542669	B1	19970416		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
ES 2101826	T3	19970716	ES 1992-810747	19921005 <--
AU 9227420	A	19930506	AU 1992-27420	19921029 <--
AU 666878	B2	19960229		
CA 2081954	A1	19930505	CA 1992-2081954	19921102 <--
JP 05320416	A	19931203	JP 1992-294676	19921104 <--
JP 3281656	B2	20020513		
US 5989453	A	19991123	US 1994-206160	19940307 <--
PRIORITY APPLN. INFO.:			EP 1991-402945 A	19911104 <--
			FR 1990-5910 A	19900511 <--
			US 1991-698776 B1	19910513 <--
			EP 1992-810747 A	19921005 <--
			US 1992-969618 B2	19921030 <--
			US 1993-123037 B2	19930920 <--

OTHER SOURCE(S): MARPAT 119:273499
AB Fluorescent pigments are prepared by mixing colorants and monomers for polycondensation polymers not containing aldehyde (especially HCHO) derivs. in reactors (preferably extruders), breaking, cooling, and micronizing. Thus, extruding pentaerythritol, phthalic anhydride, and Rhodamine B at 190-260°, breaking the extruded paste on a conveyor belt, cooling, and micronizing at 20

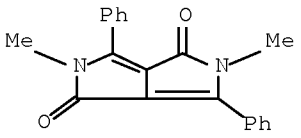
kg/h and room temperature gave particles having ≥99% of average diameter 1-15 μM.

IT 96159-05-6P 96159-17-0P
RL: PREP (Preparation)
(condensation polymer composites, manufacture by extrusion, microparticles of)

RN 96159-05-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,3,5,6-tetrakis(4-chlorophenyl)-2,5-dihydro- (CA INDEX NAME)



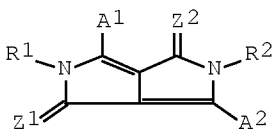
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



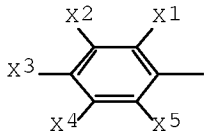
L66 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:29594 CAPLUS Full-text
DOCUMENT NUMBER: 118:29594
TITLE: Organic electroluminescent element
INVENTOR(S): Matsumura, Michio; Kudo, Tetsu; Wooden, Gary
PATENT ASSIGNEE(S): Japat Ltd., Switz.
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 499011	A1	19920819	EP 1991-810097	19910212 <--
R: GB				
PRIORITY APPLN. INFO.:			EP 1991-810097	19910212 <--
OTHER SOURCE(S):	MARPAT 118:29594			

GI



I



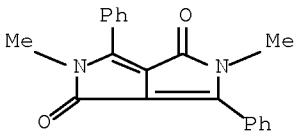
II

AB Electroluminescent devices are described which employ as a light-emitting material compds. described by the general formula I (Z1 and Z2 are independently selected from O and S; R1 and R2 are independently selected from H, C1-18 alkyl groups, C3-18 alkenyl groups in which the double bond is not in the C1 position, or a phenylalkyl group with a C1-5 alkyl group; A1 and A2 are independently selected from 3-pyridyl, 4-pyridyl, or groups described by the general formula II in which X1 and X5 are independently selected from H, C1-5 alkyl groups, C1-5 alkoxy groups, or halogens, and X1, X3, and X4 are independently selected from H, C1-5 alkyl groups, C1-5 alkoxy groups, dialkylamino groups with 1-5 C/alkyl group, Ph, CN, -CF3, or halogens).

IT 96159-17-0 119273-55-1
RL: PRP (Properties)
(electroluminescent elements with light-emitting layers from)

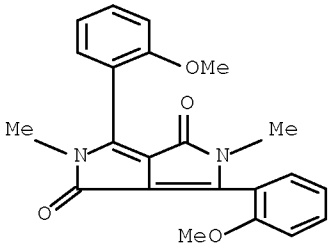
RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



RN 119273-55-1 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(2-methoxyphenyl)-2,5-dimethyl- (CA INDEX NAME)



L66 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:438646 CAPLUS Full-text

DOCUMENT NUMBER: 115:38646

TITLE: Electrophotographic photoconductors

INVENTOR(S): Kawahara, Tatsuro

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

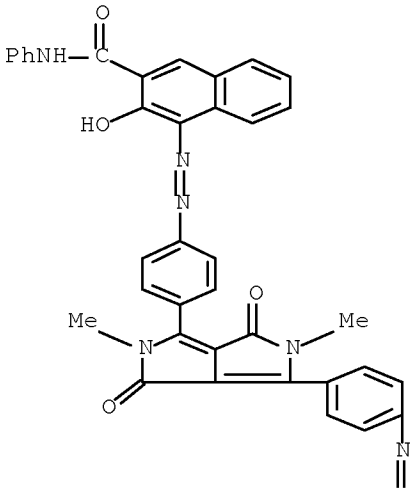
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

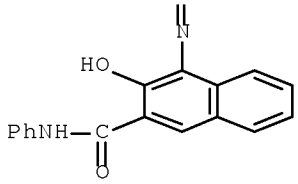
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03011357	A	19910118	JP 1989-147267	19890609 <--

PRIORITY APPLN. INFO.: JP 1989-147267 19890609 <--
OTHER SOURCE(S): MARPAT 115:38646
GI For diagram(s), see printed CA Issue.
AB Compds. (I) (Cp = coupler group) are contained in the photoconductors . Typical coupler groups are II-V (X = carbon or heterocyclic rings; Y = -CONR1R2, -CONHN:CR1R2; R1-3 = H, hydrocarbyl, heterocyclyl; R1-2 may jointly form a ring). High durability and sensitivity of the photoconductors are attained. Thus, an Al-coated polyester film was coated with a composition containing phenoxy resin and compound I (Cp = VI), and then with another composition containing p-diethylaminobenzaldehyde diphenylhydrazone and polycarbonate to obtain a photoconductor that showed sensitivity (lux-s. required for half-decay of charged voltage) 4.5.
IT 131024-44-7 134702-08-2 134702-09-3
134702-10-6 134702-11-7 134702-12-8
134702-13-9 134702-14-0 134702-15-1
134702-16-2 134702-17-3 134702-18-4
134702-19-5 134702-20-8 134702-21-9
134702-22-0 134702-23-1 134702-24-2
134702-25-3 134702-26-4
RL: USES (Uses)
(as charge-generating agent, electrophotog. photoconductors containing)
RN 131024-44-7 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

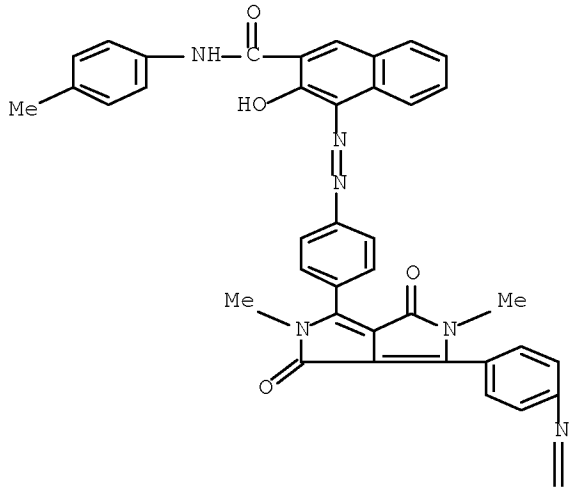


PAGE 2-A



RN 134702-08-2 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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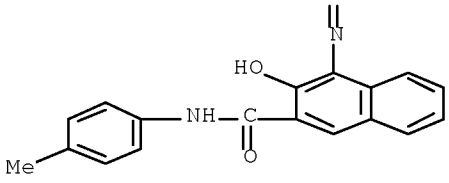
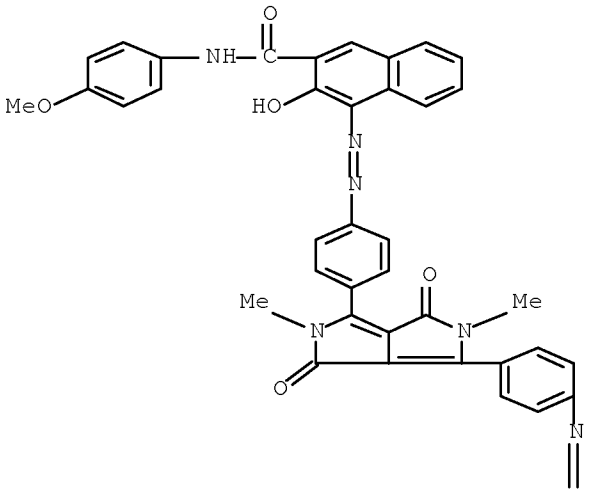


RN 134702-09-3 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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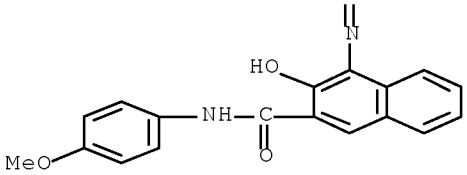
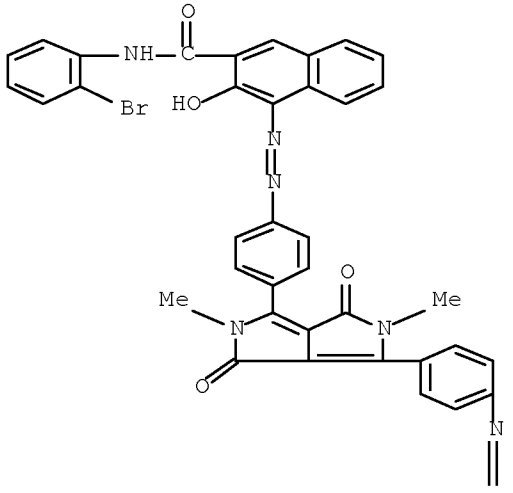
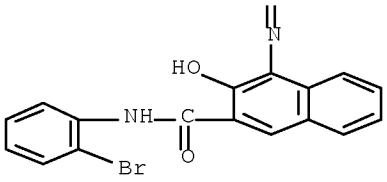


RN 134702-10-6 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[N-(2-bromophenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A

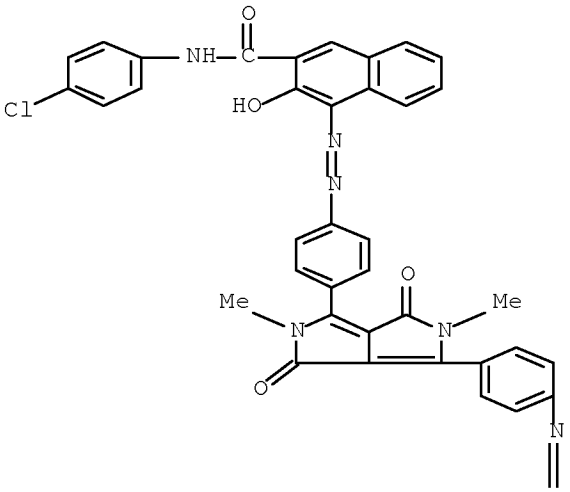


PAGE 2-A



RN 134702-11-7 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[N-(4-chlorophenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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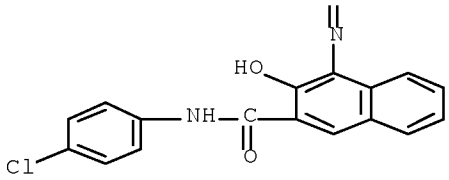
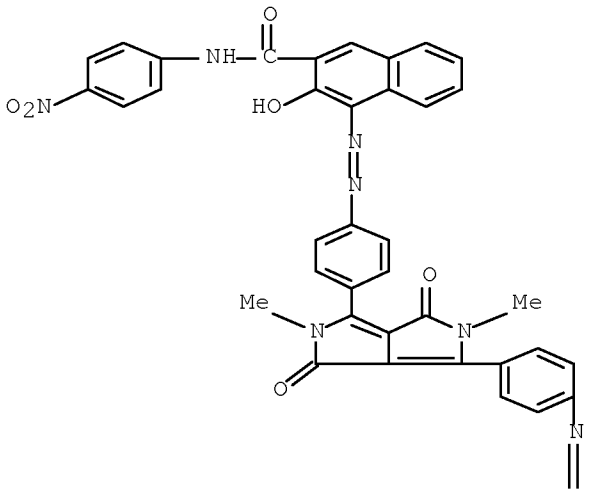


RN 134702-12-8 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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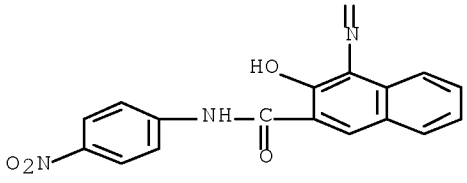
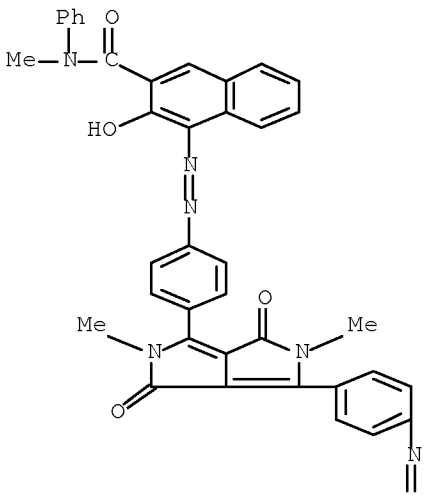


RN 134702-13-9 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-methyl-N-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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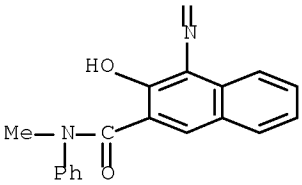
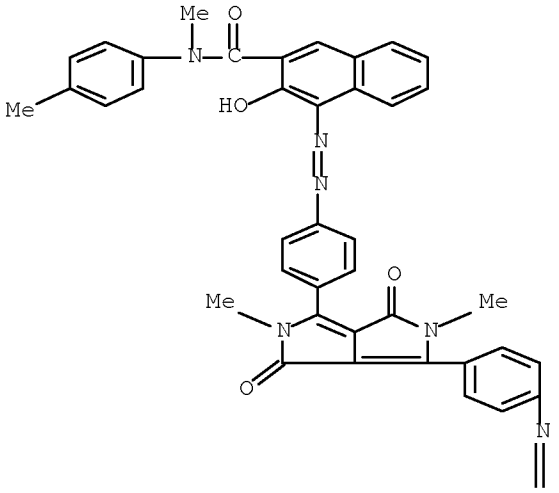


RN 134702-14-0 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-methyl-N-(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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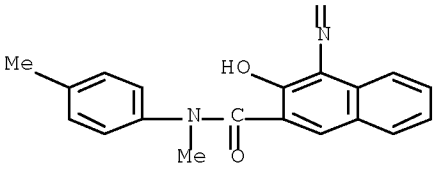
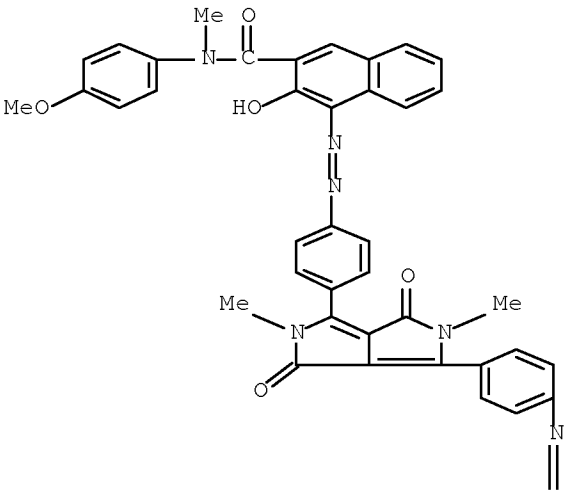


RN 134702-15-1 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-methoxyphenyl)-N-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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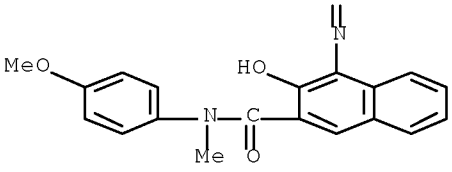
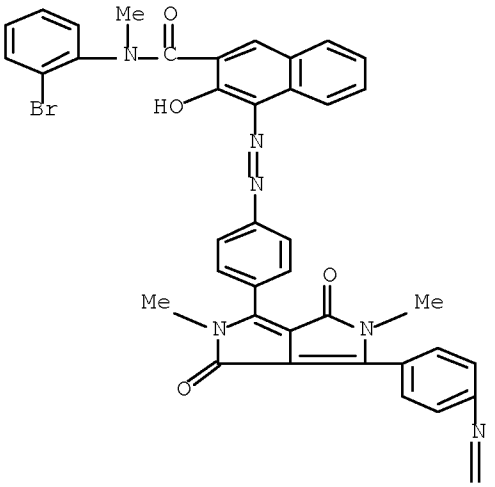


RN 134702-16-2 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[N-(2-bromophenyl)-3-hydroxy-N-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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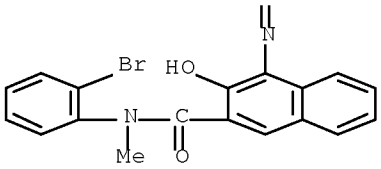
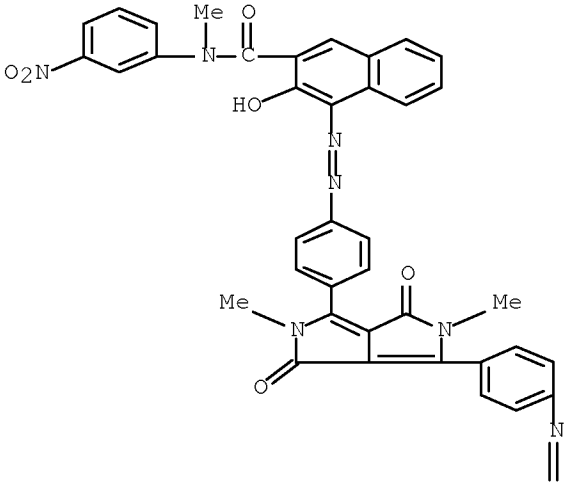


RN 134702-17-3 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-methyl-N-(3-nitrophenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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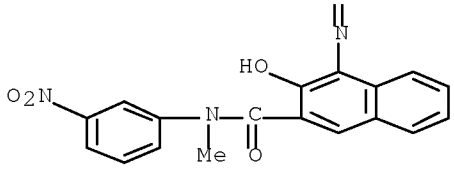
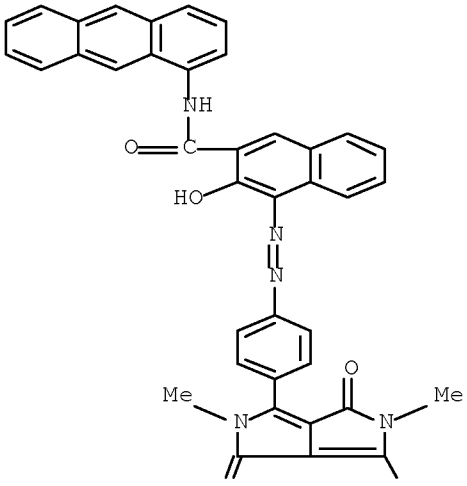


RN 134702-18-4 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[N-1-anthracenyl-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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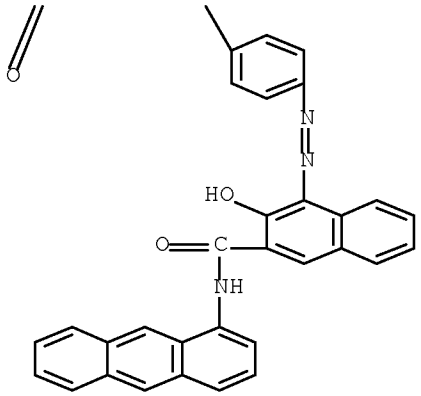
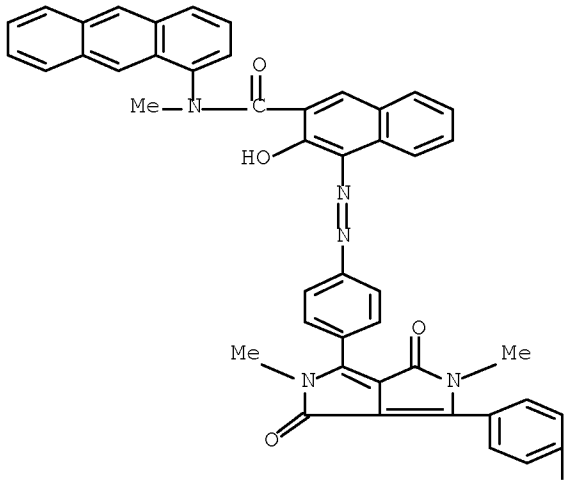


RN 134702-19-5 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[N-1-anthracenyl-3-hydroxy-N-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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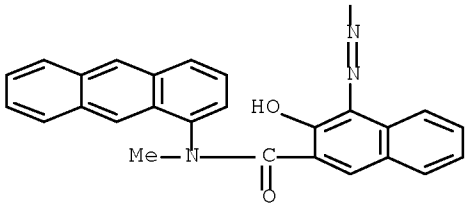
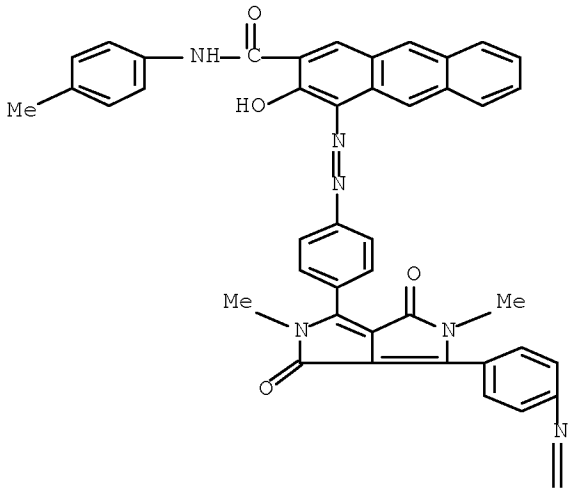


RN 134702-20-8 CAPLUS
CN 2-Anthracenecarboxamide, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-N-(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



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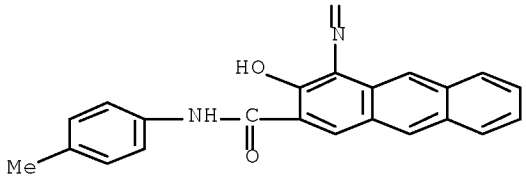

RN 134702-21-9 CAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-, bis[[(4-chlorophenyl)methylene]hydrazide] (9CI) (CA INDEX NAME)

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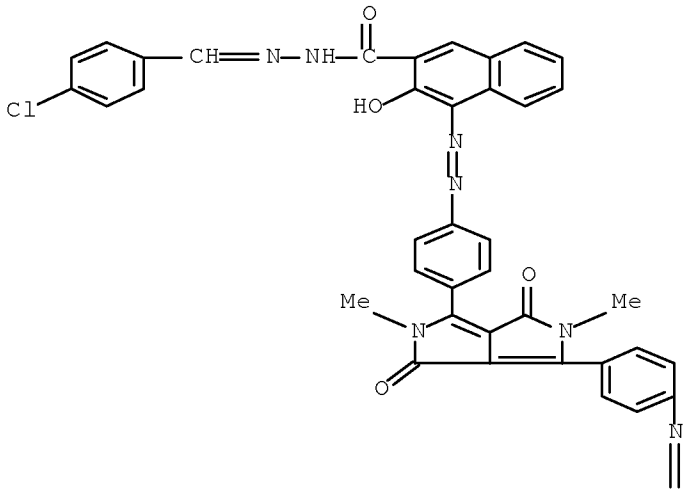
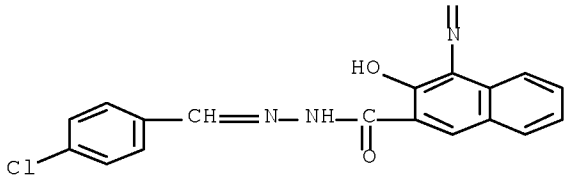


PAGE 2-A



RN 134702-22-0 CAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-, bis[[(4-nitrophenyl)methylene]hydrazide] (9CI) (CA INDEX NAME)

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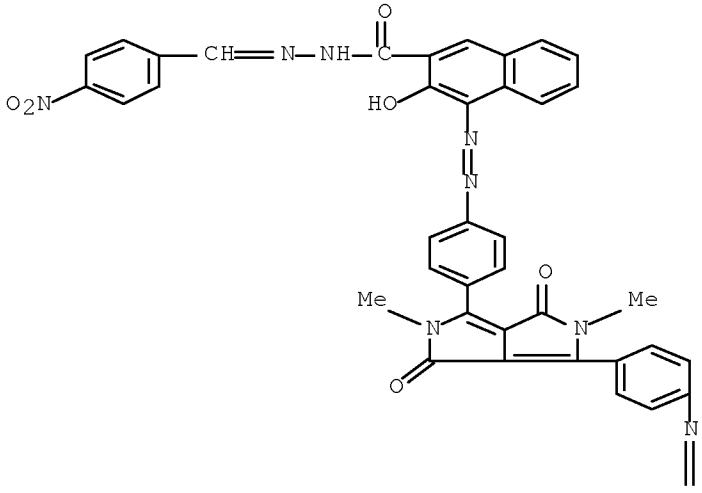
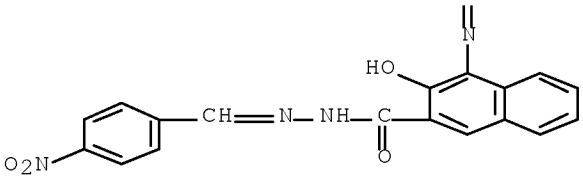
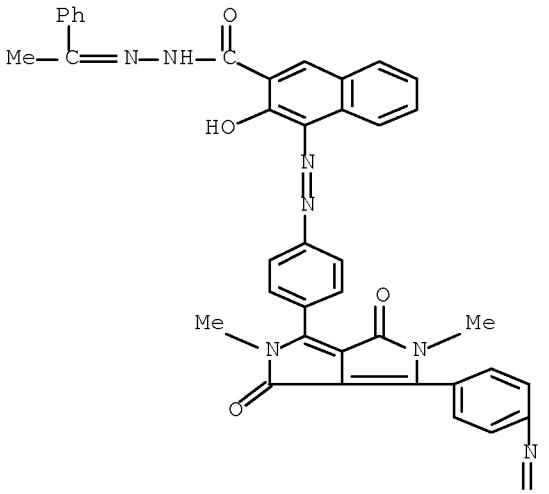


PAGE 2-A

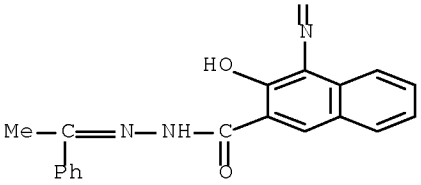


RN 134702-23-1 CAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-, bis[(1-phenylethylidene)hydrazide] (9CI) (CA INDEX NAME)

PAGE 1-A

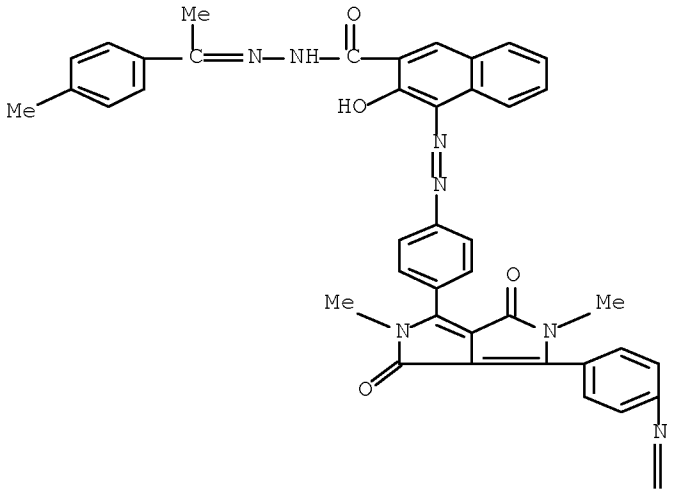


PAGE 2-A

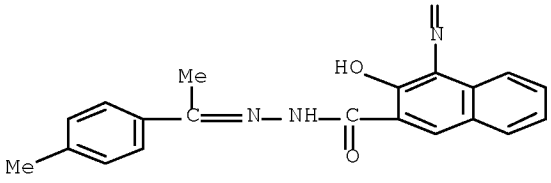


RN 134702-24-2 CAPLUS
CN 2-Naphthalenecarboxylic acid, 4,4'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[3-hydroxy-, bis[[1-(4-methylphenyl)ethylidene]hydrazide] (9CI) (CA INDEX NAME)

PAGE 1-A

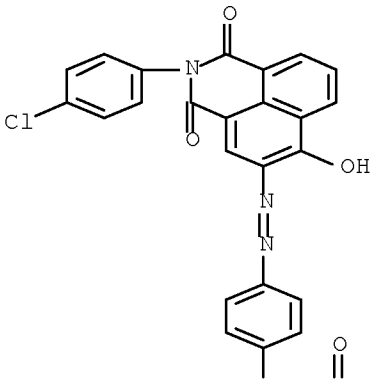


PAGE 2-A

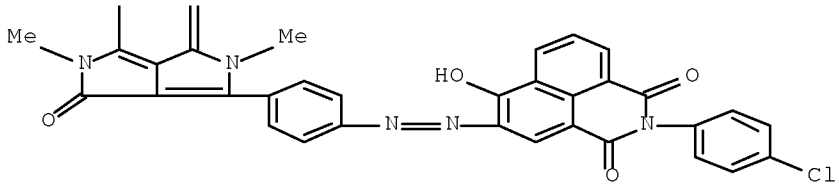


RN 134702-25-3 CAPLUS
CN 1H-Benz[de]isoquinoline-1,3(2H)-dione, 5,5'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[2-(4-chlorophenyl)-6-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A

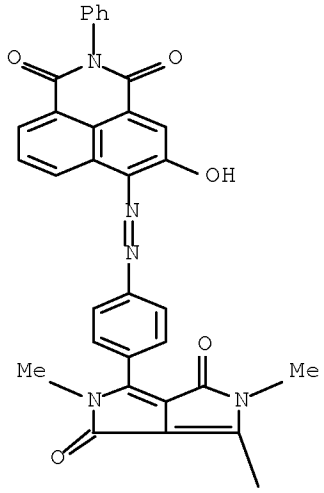


PAGE 2-A

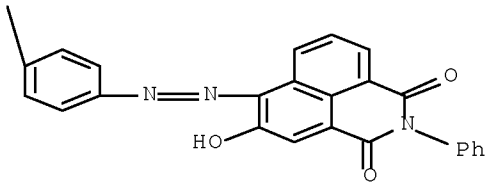


RN 134702-26-4 CAPLUS
CN 1H-Benz[de]isoquinoline-1,3(2H)-dione, 6,6'-[(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(4,1-phenyleneazo)]bis[5-hydroxy-2-phenyl- (9CI) (CA INDEX NAME)

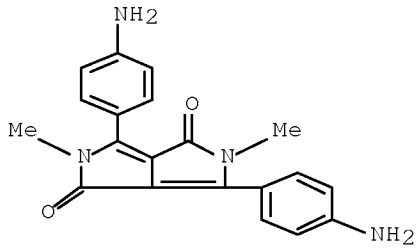
PAGE 1-A



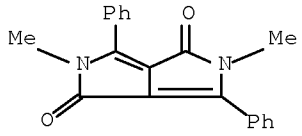
PAGE 2-A



IT 134702-28-6P
RL: PREP (Preparation)
(preparation and diazotization and coupling of, disazo dye for electrophotog. photoconductors from)
RN 134702-28-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-aminophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)

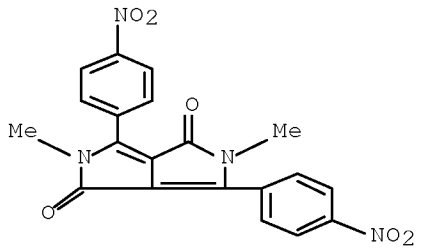


IT 96159-17-0P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and nitration of, disazo dye for electrophotog. photoconductors
from)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



IT 134702-27-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of, disazo dye for electrophotog. photoconductors
from)

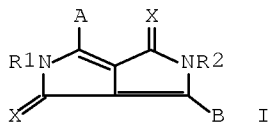
RN 134702-27-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(4-nitrophenyl)- (CA INDEX NAME)



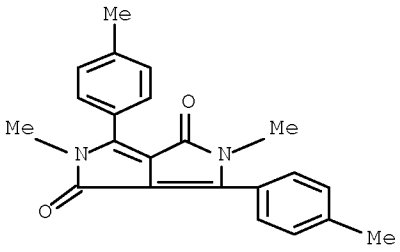
L66 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:256681 CAPLUS Full-text
DOCUMENT NUMBER: 114:256681
TITLE: Electroluminescent element
INVENTOR(S): Sakon, Hirota; Sasaki, Masaomi; Onuma, Teruyuki
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02296891	A	19901207	JP 1989-118418	19890510 <--

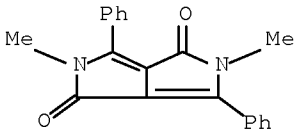
PRIORITY APPLN. INFO.: JP 1989-118418 19890510 <--
OTHER SOURCE(S): MARPAT 114:256681
GI



AB The title element comprises ≥1 layer(s) of organic compound, ≥1 layer(s) of which contains a pyrrolopyrrole derivative I (A, B = alkyl, cycloalkyl, or aryl group; R1, R2 = H, alkyl or aryl group; X = O or S).
IT 96158-99-5 96159-17-0
RL: PRP (Properties)
(electroluminescent phosphor)
RN 96158-99-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



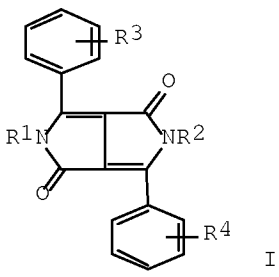
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L66 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:85139 CAPLUS Full-text
DOCUMENT NUMBER: 114:85139
TITLE: Pyrrolopyrrole derivatives as petroleum product identifying agents and method of adding the agents
INVENTOR(S): Kitao, Teijiro; Yoshida, Osamu; Kaieda, Osamu; Shimoyama, Fumioki
PATENT ASSIGNEE(S): Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02216457	A	19900829	JP 1988-288761	19881117 <--
PRIORITY APPLN. INFO.:			JP 1988-288761	19881117 <--

OTHER SOURCE(S): MARPAT 114:85139
GI

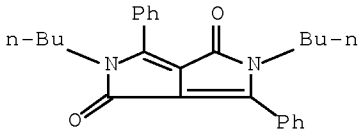


I

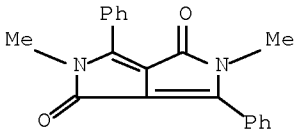
AB The title derivs. I [R1-2 = H, (un)substituted alkyl; R1 = R2 ≠ H; R3-4 = H, Me] are added to petroleum products as organic solns. I identifies various petroleum products at small amount even in the presence of impurities or other additives. Thus, N-alkylation of I (R1-4 = H) with BuBr in DMF in the presence of K2CO3 at 140° gave I (R1-2 = Bu, R3-4 = H) (II), whose solution in xylene changed the color of kerosine to yellow at 10 ppm (as II).

IT 96159-01-2P 96159-17-0P 132029-45-9P
132029-46-0P 132029-47-1P
RL: PREP (Preparation)
(preparation of, as identifying agent for petroleum products)

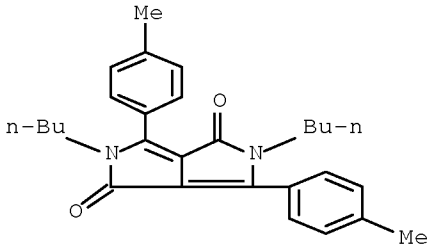
RN 96159-01-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



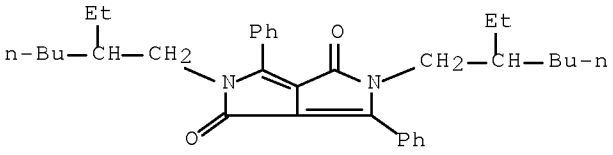
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



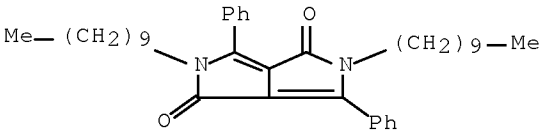
RN 132029-45-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



RN 132029-46-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-bis(2-ethylhexyl)-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



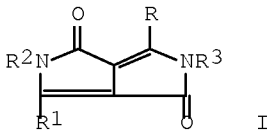
RN 132029-47-1 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-didecyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



L66 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1985:186667 CAPLUS Full-text
DOCUMENT NUMBER: 102:186667
ORIGINAL REFERENCE NO.: 102:29297a
TITLE: 1,4-Diketopyrrolo[3,4-c]pyrroles
INVENTOR(S): Jost, Max; Iqbal, Abul; Rochat, Alain Claude
PATENT ASSIGNEE(S): Ciba-Geigy A.-G. , Switz.
SOURCE: Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 133156	A2	19850213	EP 1984-810310	19840625 <--
EP 133156	A3	19871104		
EP 133156	B1	19910710		
R: CH, DE, FR, GB, IT, LI				
US 4585878	A	19860429	US 1984-621649	19840618 <--
CA 1230341	A1	19871215	CA 1984-457526	19840627 <--
JP 60035056	A	19850222	JP 1984-135042	19840629 <--
JP 04042431	B	19920713		
US 4666455	A	19870519	US 1986-823694	19860129 <--
PRIORITY APPLN. INFO.:			CH 1983-3568 A	19830629 <--
			US 1984-621649 A3	19840618 <--

OTHER SOURCE(S): MARPAT 102:186667
GI



I

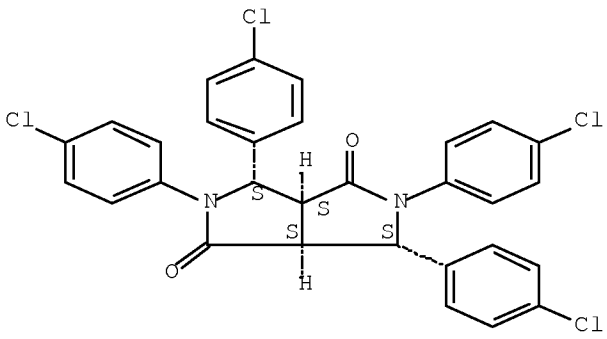
AB Title compds. of general structure I are prepared, where R and R1 are isocyclic aromatic or heterocyclic arom radicals and R2 and R3 are non-water-solubilizing substituents or H. I can be used as dyes, e.g. for polyester, or pigments for coatings and plastics, giving fast yellow to red dyeings. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole [54660-00-3] was treated with p-MeC6H4SO3Me and K2CO3 in PhNO2 at 200-205° to give crystalline orange I (R = R1 = Ph, R2 = R3 = Me) [96159-17-0], a yellow dye for polyester when applied from an aqueous dyebath. Seventeen other I were similarly prepared

IT 96159-04-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidation of)

RN 96159-04-5 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,3,5,6-tetrakis(4-chlorophenyl)hexahydro-, (3α,3aα,6α,6aα)- (9CI) (CA INDEX NAME)

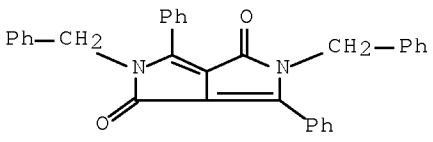
Relative stereochemistry.



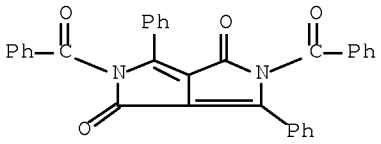
IT 96159-02-3P 96159-03-4P 96159-05-6P
96159-06-7P 96159-07-8P 96159-11-4P
96159-13-6P 96159-14-7P 96159-15-8P
96159-16-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

RN 96159-02-3 CAPLUS

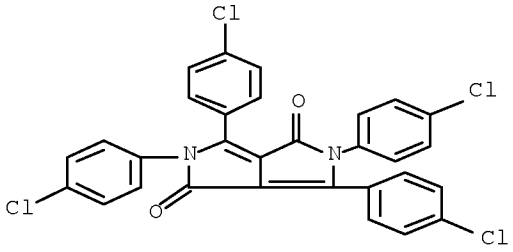
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-bis(phenylmethyl)- (CA INDEX NAME)



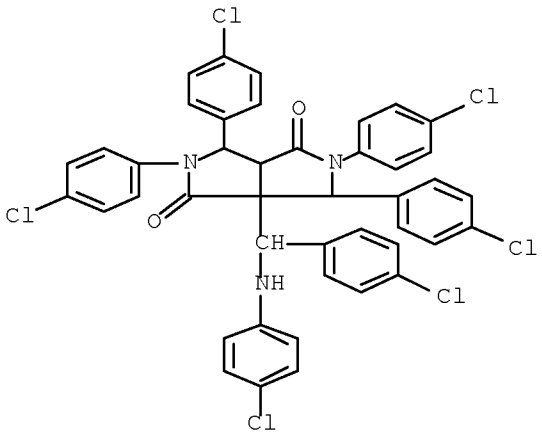
RN 96159-03-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibenzoyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



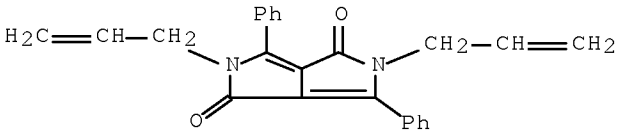
RN 96159-05-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,3,5,6-tetrakis(4-chlorophenyl)-2,5-dihydro- (CA INDEX NAME)



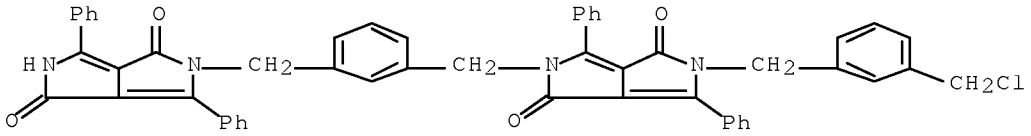
RN 96159-06-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,3,5,6-tetrakis(4-chlorophenyl)-3a-[(4-chlorophenyl)[(4-chlorophenyl)amino]methyl]hexahydro- (CA INDEX NAME)



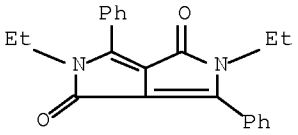
RN 96159-07-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-2,5-di-2-propen-1-yl- (CA INDEX NAME)



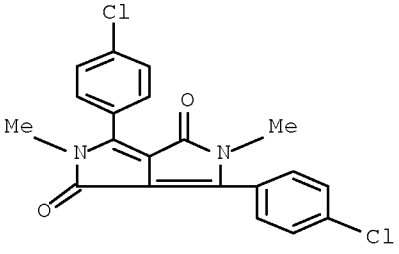
RN 96159-11-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2-[[3-(chloromethyl)phenyl]methyl]-2,5-dihydro-3,6-diphenyl-5-[[3-[(1,2,4,5-tetrahydro-1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrol-2-yl)methyl]phenyl]methyl]- (9CI) (CA INDEX NAME)



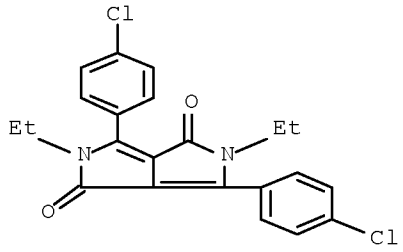
RN 96159-13-6 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-diethyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



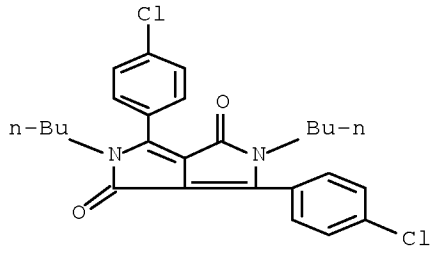
RN 96159-14-7 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



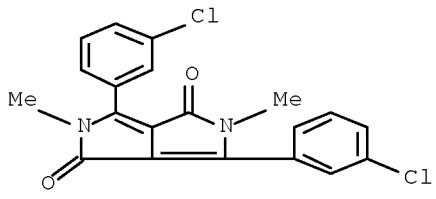
RN 96159-15-8 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



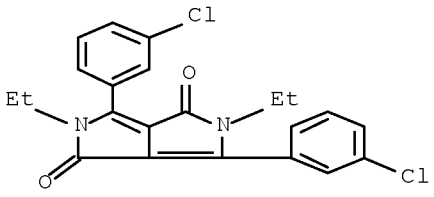
RN 96159-16-9 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-3,6-bis(4-chlorophenyl)-2,5-dihydro- (CA INDEX NAME)



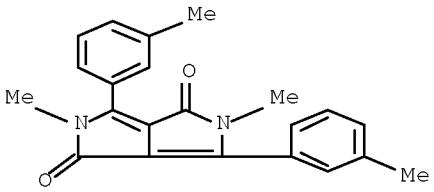
IT 96158-96-2P 96158-97-3P 96158-98-4P
96158-99-5P 96159-01-2P 96159-17-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as dye for polyester fibers)
RN 96158-96-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3-chlorophenyl)-2,5-dihydro-2,5-dimethyl- (CA INDEX NAME)



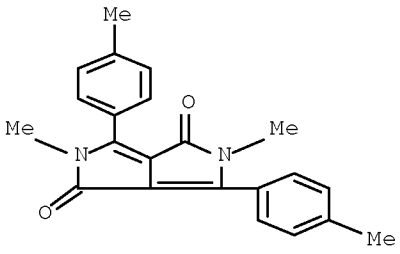
RN 96158-97-3 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3-chlorophenyl)-2,5-diethyl-2,5-dihydro- (CA INDEX NAME)



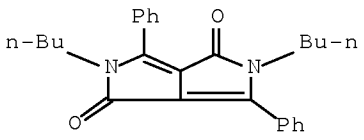
RN 96158-98-4 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(3-methylphenyl)- (CA INDEX NAME)



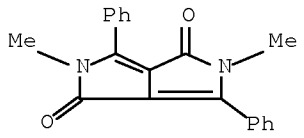
RN 96158-99-5 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-bis(4-methylphenyl)- (CA INDEX NAME)



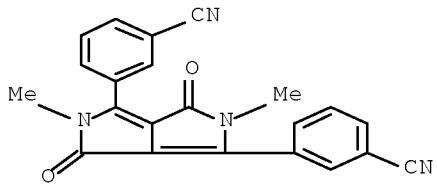
RN 96159-01-2 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dibutyl-2,5-dihydro-3,6-diphenyl- (CA INDEX NAME)



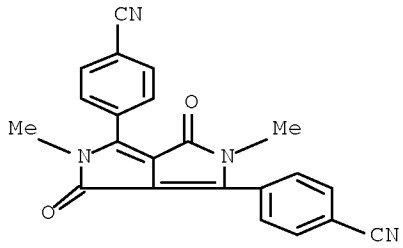
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



IT 96158-94-0P 96158-95-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as pigment for coatings and PVC)
RN 96158-94-0 CAPLUS
CN Benzonitrile, 3,3'-(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



RN 96158-95-1 CAPLUS
CN Benzonitrile, 4,4'-(2,3,5,6-tetrahydro-2,5-dimethyl-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



CLAIMS 7-10, SEARCH #3
SEARCH OF RN WITH THE MOST HITS

```
=> d que nos l30
L28           1 SEA FILE=REGISTRY ABB=ON  96159-17-0
L30          54 SEA FILE=CAPLUS ABB=ON  L28

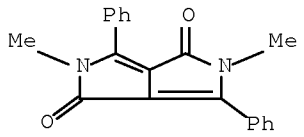

=> s l30 not l47,l62,l64,l66
L67          33 L30 NOT (L47 OR L62 OR L64 OR L66)

=> s l67 and l33
L68          14 L67 AND L33

=> d ibib abs hitstr 1-14; fil hom

L68  ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2002:477117  CAPLUS  Full-text
DOCUMENT NUMBER:         137:37989
TITLE:                   Rotational diffusion of nondipolar probes in Triton
                         X-100 micelles: Role of specific interactions and
                         micelle size on probe dynamics
AUTHOR(S):               Dutt, G. B.
CORPORATE SOURCE:        Radiation Chemistry Chemical Dynamics Division, Bhabha
                         Atomic Research Centre, Mumbai, 400 085, India
SOURCE:                  Journal of Physical Chemistry B (2002),
                         106(29), 7398-7404
                         CODEN: JPCBFK; ISSN: 1089-5647
PUBLISHER:               American Chemical Society
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB    Temperature-dependent rotational relaxation studies of 2 structurally similar
      nondipolar probes: 2,5-dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4- c]pyrrole
      (DMDPP) and 1,4-dioxo-3,6-diphenylpyrrolo[3,4-c]pyrrole (DPP), were carried
      out in Triton X-100 micelles in an attempt to explore the influence of
      specific interactions and micellar size on the dynamics of probe mols.  The
      time-resolved anisotropy in micelles, decays as a sum of two exponentials with
      2 time consts., one corresponding to a fast reorientation time and the other
      to a slow one, for both the probes over the entire range of temperature
      studied.  The results are analyzed in terms of a two-step model consisting of
      fast-restricted rotation of the probe and slow lateral diffusion of the probe
      in the micelle that are coupled to the rotation of the micelle as a whole.
      However, as the temperature is raised, the size of the Triton X-100 micelles
      increase significantly and the measured slow reorientation time corresponds
      solely to the lateral diffusion of the probe in the micelle.  This is because
      the reorientation time for the overall rotation of the micelle becomes very
      long and consequently the fluorescence depolarization due to this process
      becomes negligible.  The short and long components of the anisotropy decay for
      DPP are found to be considerably slower than the corresponding ones for DMDPP
      due to the strong hydrogen bonding interactions between the ethylene oxide
      groups of the surfactant units and the secondary amino groups of the probe.
IT    96159-17-0, 2,5-Dimethyl-1,4-dioxo-3,6-diphenylpyrrolo[3,4-
      c]pyrrole
      RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP
      (Physical process); PROC (Process)
         (probe; effect of specific interactions and micelle size on rotational
         diffusion of nondipolar probes in Triton X-100 micelles)
```

RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)

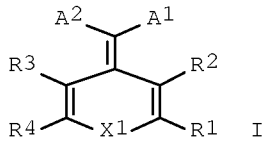


REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:27766 CAPLUS Full-text
DOCUMENT NUMBER: 136:110193
TITLE: Red-emitting organic electroluminescent devices with high electric energy conversion efficiency and color purity
INVENTOR(S): Tominaga, Takeshi; Murase, Seiichiro; Kohama, Toru
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002008863	A	20020111	JP 2000-184269	20000620 <--
PRIORITY APPLN. INFO.:			JP 2000-184269	20000620 <--

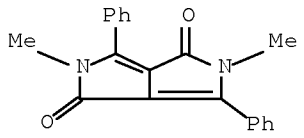
OTHER SOURCE(S): MARPAT 136:110193
GI



I

AB The devices having emission peak at 580-720 nm, contain fluorescent substances having fluorescent peak at 540-720 nm and I [A1,2 = electron-withdrawing group, aromatic heterocycle; X1 = O, S, (un)substituted N; R1-4 = H, alkyl, alkoxy, halo, aryl, aralkyl, alkenyl, arylether, heterocycle, cyano, aldehyde, carbonyl, ester, carbamoyl, amino, condensed ring (formed with adjacent substituent) selected from aromatic, aliphatic, or heterocyclic ring; ≥1 R1-4 = MeR7C:CR5R6; R5-7 = same as R1-4], which may be dopants, between anodes and cathodes. The compds. may have polar groups, vinyl groups, aromatic rings, and/or heterocyclic rings. The devices are useful for matrix-type displays (e.g., computers, televisions) and segment-type displays (e.g., clocks, thermometers).

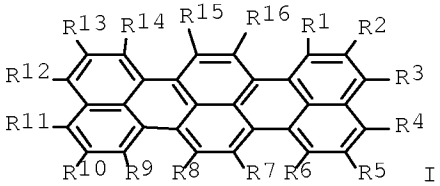
IT 96159-17-0
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(host material; red-emitting organic electroluminescent devices containing heterocyclic dopants with high elec. energy conversion efficiency and color purity)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



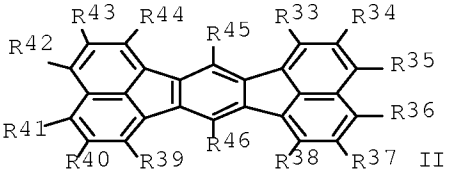
L68 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:881989 CAPLUS Full-text
DOCUMENT NUMBER: 136:29036
TITLE: Electroluminescent device using condensed rings
INVENTOR(S): Kohama, Toru; Tominaga, Takeshi; Murase, Seiichiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001338764	A	20011207	JP 2000-159883	20000530 <--

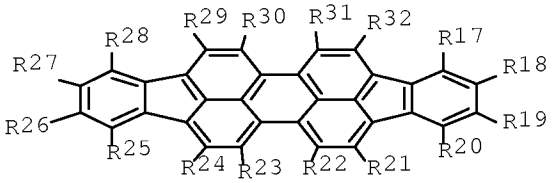
PRIORITY APPLN. INFO.: JP 2000-159883 20000530 <--
OTHER SOURCE(S): MARPAT 136:29036
GI



I



II



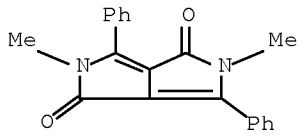
III

AB The invention relates to a red-emitting electroluminescent device having the emission peak in 580 - 720 nm between the anode and the cathode, wherein the electroluminescent layer comprises the fluorescent substance having the emission peak in 540 - 720 nm as a host material, and the condensed rings I, II, III [R1-46 = the same or different groups selected from H, alkyl, alkoxy, halo, aryl, aralkyl, alkenyl, aryl ether, heterocyclyl, cyano, aldehyde, CO, ester, carbamoyl, amino and fused rings or aliphatic rings formed with adjacent substituents]. The red luminous component offers superior in color purity.

IT 96159-17-0
RL: DEV (Device component use); USES (Uses)
(host material; electroluminescent device using condensed rings and)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:881988 CAPLUS Full-text

DOCUMENT NUMBER: 136:29035

TITLE: Electroluminescent device using coumarin derivatives

INVENTOR(S): Kohama, Toru; Tominaga, Takeshi; Murase, Seiichiro

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

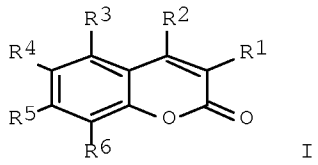
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001338763	A	20011207	JP 2000-159882	20000530 <--

PRIORITY APPLN. INFO.: JP 2000-159882 20000530 <--

OTHER SOURCE(S): MARPAT 136:29035

GI



I

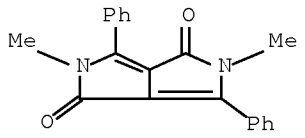
AB The invention relates to a red-emitting electroluminescent device having the emission peak in 580 - 720 nm between the anode and the cathode, wherein the

electroluminescent layer comprises the fluorescent substance having the emission peak in 540 - 720 nm as a host material, and the coumarins I [R1-6 = the same or different groups selected from H, alkyl, alkoxy, halo, aryl, aralkyl, alkenyl, aryl ether, heterocyclyl, cyano, aldehyde, CO, ester, carbamoyl, amino and fused rings or aliphatic rings formed with adjacent substituents]. The red luminous component offers superior in color purity.

IT 96159-17-0
RL: DEV (Device component use); USES (Uses)
(host material; electroluminescent device using coumarin derivs. and)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:576862 CAPLUS Full-text

DOCUMENT NUMBER: 133:213859

TITLE: Stability of dye loaded faujasites against organic solvents: effect of SiCl4 treatment

AUTHOR(S): Holderich, Wolfgang F.; Rohrlich, Nadja; Bartl, Peter; Chassot, Laurent

CORPORATE SOURCE: Chem. Technol. Heterogeneous Catalysis, University of Technology, RWTH Aachen, Aachen, 52074, Germany

SOURCE: Physical Chemistry Chemical Physics (2000), 2(17), 3919-3923
CODEN: PPCPFQ; ISSN: 1463-9076

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

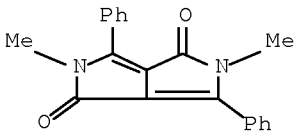
LANGUAGE: English

AB Several dyes (quinizarin, indigo, 1,4-diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole) were loaded within faujasites and mordenite. In the presence of organic solvents, leaching was observed However, after treatment with SiCl4 vapor the pores of the zeolites were sealed and no leaching could be observed Furthermore, samples of NaY zeolite loaded with 1,4-diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole were characterized with diffuse reflectance UV/VIS spectroscopy, diffuse reflectance IR spectroscopy, thermogravimetry/differential scanning calorimetry, XRD and nitrogen adsorption, both before and after the SiCl4 treatment. In comparison with the untreated dye loaded zeolite, the thermal stability of the dye inside the sealed zeolite increased. The treatment does not have any influence on the framework composition or the dye.

IT 96159-17-0, 1,4-Diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole)
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(stability of dye loaded faujasites against organic solvents and effect of SiCl4 treatment)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



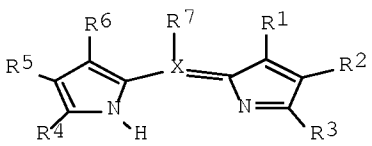
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:335104 CAPLUS Full-text
DOCUMENT NUMBER: 132:354601
TITLE: Electroluminescent element and devices
INVENTOR(S): Kohama, Akira; Tominaga, Tsuyoshi; Kitazawa, Daisuke; Himeshima, Yoshio
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1000998	A1	20000517	EP 1999-308823	19991105 <--
EP 1000998	B1	20021009		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000208265	A	20000728	JP 1999-188766	19990702 <--
JP 3389888	B2	20030324		
JP 2000208266	A	20000728	JP 1999-232414	19990819 <--
JP 2000208267	A	20000728	JP 1999-232415	19990819 <--
JP 2000208268	A	20000728	JP 1999-232416	19990819 <--
JP 2000208269	A	20000728	JP 1999-236564	19990824 <--
JP 2000208270	A	20000728	JP 1999-238236	19990825 <--
JP 3743217	B2	20060208		
JP 2000208271	A	20000728	JP 1999-238237	19990825 <--
JP 2000208272	A	20000728	JP 1999-247226	19990901 <--
JP 2000208273	A	20000728	JP 1999-247227	19990901 <--
KR 2000035289	A	20000626	KR 1999-49147	19991108 <--
US 2002160227	A1	20021031	US 2002-173446	20020618 <--
US 6921589	B2	20050726		

PRIORITY APPLN. INFO.:
JP 1998-317681 A 19981109 <--
JP 1999-188766 A 19990702 <--
US 1999-432066 A1 19991102 <--

OTHER SOURCE(S): MARPAT 132:354601
GI



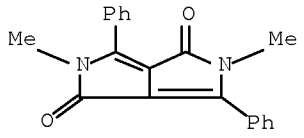
I

AB Electroluminescent devices are described which emit a peak wavelength at ≤ 580 nm in which the active material contains at least a fluorescent compound with a fluorescence maximum at ≥ 540 nm or above and a compound with a pyrromethene structure described by the general formula I or a metal complex thereof (R1-7 = the same or different groups selected from H, alkyl, alkoxy, halo, aryl, aralkyl, alkenyl, aryl ether, heterocyclic, cyano, aldehyde, CO, ester, carbamoyl, amino and fused rings or aliphatic rings formed with adjacent substituents; and X = C or nitrogen, with the restriction that, where X = nitrogen, R7 is absent). Display, signaling and illumination devices employing the elements are described.

IT 96159-17-0
RL: DEV (Device component use); USES (Uses)
(electroluminescent elements using pyrromethene group-containing compds.)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:585651 CAPLUS Full-text
DOCUMENT NUMBER: 129:277414
TITLE: Pigment dispersants containing N-alkylated pigment derivatives, pigment compositions containing the same, and manufacture of N-alkylated pigment derivatives
INVENTOR(S): Ohashi, Yuji; Ishimori, Motokazu
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

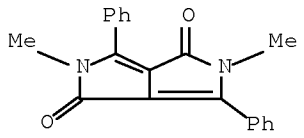
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10237344	A	19980908	JP 1997-45604	19970228 <--

PRIORITY APPLN. INFO.: JP 1997-45604 19970228 <--

AB The title dispersants contain N-alkylated condensed polynuclear pigment derivs. obtained by alkyl substitution of the H atom bonded to the imino nitrogen atom in an imino group-containing heterocyclic ring condensed in a polynuclear form. γ-Quinacridone (Fastogen Red 7094Y) in DMF was butylated with BuBr in the presence of K tert-butoxide. An acrylic melamine composition containing Fastogen Red 7094Y dispersed by the above butylation product gave a coating with superior luster to that using no dispersant.

IT 96159-17-0P, 1,4-Diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-

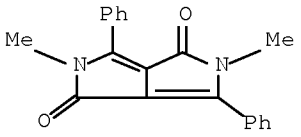
c]pyrrole
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(pigment dispersants containing N-alkylated pigment derivs., pigment compns. containing the same, and manufacture of N-alkylated pigment derivs.)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:410659 CAPLUS Full-text
DOCUMENT NUMBER: 129:97327
TITLE: Dye-containing molecular sieve
INVENTOR(S): Holderich, Wolfgang; Rohrlich, Nadja; Chassot, Laurent
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

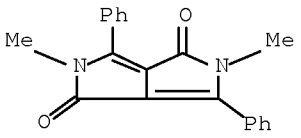
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 849221	A1	19980624	EP 1997-810960	19971210 <--
EP 849221	B1	20010103		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10194728	A	19980728	JP 1997-351034	19971219 <--
US 5968242	A	19991019	US 1997-994218	19971219 <--
PRIORITY APPLN. INFO.:			CH 1996-3123 A	19961219 <--

AB Mol. sieves containing dye mols. in all or some pores and a covalently bonded pore-decreasing modification agent are produced either (1) by complete or partial filling of pores with dye mols. and subsequent reaction with the modifier or (2) decreasing of the diameter of pores completely or partially filled with dyes by a reaction with the modifier. The products are suitable as pigments for coloring of high-mol. organic materials (especially biopolymers, polymers, glass, and ceramics).
IT 96159-17-0
RL: TEM (Technical or engineered material use); USES (Uses)
(dye in zeolitic mol. sieves)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

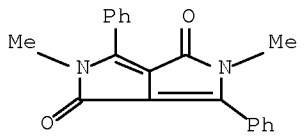
L68 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:115040 CAPLUS Full-text
DOCUMENT NUMBER: 128:155476
TITLE: Encapsulation of 1,4-diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole in faujasites
AUTHOR(S): Rohrlich, Nadja; Loffler, Elke; Zibrowius, Bodo; Chassot, Laurent; Holderich, Wolfgang F.
CORPORATE SOURCE: University of Technology RWTH Aachen, Aachen, D-52074, Germany
SOURCE: Journal of the Chemical Society, Faraday Transactions (1998), 94(4), 609-615
CODEN: JCFTEV; ISSN: 0956-5000
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Faujasite-type zeolites were loaded by vapor phase deposition with 1,4-diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole. The amount of dye was determined by thermal anal. The encapsulation of the dye inside the micropore system was established by XRD, UV-visible spectroscopy, and nitrogen adsorption. The differences in the exptl. results obtained for the Na and H forms of the same Y zeolite by NMR as well as IR spectroscopy point to specific interactions of the dye mols. with the host material.
IT 96159-17-0, 1,4-Diketo-2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(encapsulation in faujasite zeolites)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:385208 CAPLUS Full-text
DOCUMENT NUMBER: 122:163482
TITLE: Excited state electron and energy transfer of a highly fluorescent heterocyclic dye: a laser flash photolysis

study of 2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione
AUTHOR(S): Srivatsavoy, V. J. P.; Eschle, M.; Moser, J.-E.; Graetzel, M.
CORPORATE SOURCE: Institut de chimie physique 2, Ecole Polytechnique Federale de Lausanne, Lausanne, CH-1015, Switz.
SOURCE: Journal of the Chemical Society, Chemical Communications (1995), (3), 303-4
CODEN: JCCCAT; ISSN: 0022-4936
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The triplet and singlet state properties of the title compound are reported. Nitroxyl free radicals and oxygen enhance the triplet yield significantly; electron transfer from the singlet excited state to Me viologen in MeCN produces the corresponding free radicals which recombine with second-order kinetics.
IT 96159-17-0
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(excited state electron and energy transfer of a fluorescent dye)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



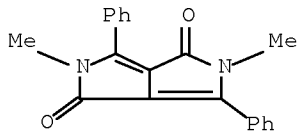
L68 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:643147 CAPLUS Full-text
DOCUMENT NUMBER: 117:243147
TITLE: Structures of 3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione and 2,5-dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione
AUTHOR(S): Mizuguchi, Jin; Grubenmann, Arnold; Wooden, Gary; Rihs, Grety
CORPORATE SOURCE: Forschungszent., Ciba-Geigy AG, Fribourg, 1701, Switz.
SOURCE: Acta Crystallographica, Section B: Structural Science (1992), B48(5), 696-700
CODEN: ASBSDK; ISSN: 0108-7681
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 3,6-Diphenylpyrrolo[3,4-c]pyrrole-1,4-dione (DPP) is triclinic, space group P.hivin.1, with a 3.817(1), b 6.516(1), c 13.531(2) Å, α 93.11(1), β 86.97(1), and γ 95.02(1)°; Z = 1, dc = 1.432, dm = 1.410; T = 293 K; R = 0.059 for 1076 reflections. 2,5-Dimethyl-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione (DM-DPP) is orthorhombic, space group Pbcn, with a 11.666(1), b 12.003(1), and c 10.779(1) Å; Z = 4, dc = 1.392, dm = 1.388; T = 293 K; R = 0.054 for 1470 reflections. Atomic coordinates are given. The DPP and DM-DPP mols., both of which belong to the point group Ci, are not entirely planar. The Ph rings are twisted in the same direction; out of the plane of the planar heterocyclic system by 7(1)° in DPP and by 31(1)° in DM-DPP. The DPP mols. align in nearly

the same mol. plane and parallel to each other due to intermol. H bonding. By contrast, the DM-DPP mols. are arranged in a herringbone fashion along the stacking axis.

IT 96159-17-0
RL: PRP (Properties)
(crystal structure of)

RN 96159-17-0 CAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:48215 CAPLUS Full-text

DOCUMENT NUMBER: 116:48215

TITLE: A large bathochromic shift from the solution to the solid state in 1,4-diketo-3,6-diphenyl-pyrrolo-[3,4-c]-pyrrole

AUTHOR(S): Mizuguchi, Jin; Wooden, Gary

CORPORATE SOURCE: Forschungszent., Ciba-Geigy A.-G., Fribourg, CH-1701, Switz.

SOURCE: Berichte der Bunsen-Gesellschaft (1991), 95(10), 1264-74
CODEN: BBPCAX; ISSN: 0005-9021

DOCUMENT TYPE: Journal

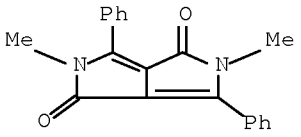
LANGUAGE: English

AB A large bathochromic shift (.apprx. 1400 cm-1) from the solution to the solid state in 1,4-diketo-3,6-diphenyl-pyrrolo-[3,4-c]-pyrrole was investigated from the standpoint of the change in electron d. on the N atom caused by deprotonation or by intermol. H bonding. The electronic state of the diketopyrrolopyrrole chromophore is most sensitively affected by an environment of proton acceptors which interact with the NH group. Mono and di=deprotonation in solution brings about large bathochromic displacements of 2650 and 3400 cm-1, resp. The deprotonation leads to increased electron d. on the nitrogen atom and, as a consequence, more overall electron d. in the chromophore which contributes to the bathochromic shift. A similar increase in electron d. is also operative in the solid state through the intermol. H bonding between the NH of 1 mol. and the O of another. The contribution of the H bond to the large shift is estimated as .apprx. 1000 cm-1 in the solid state.

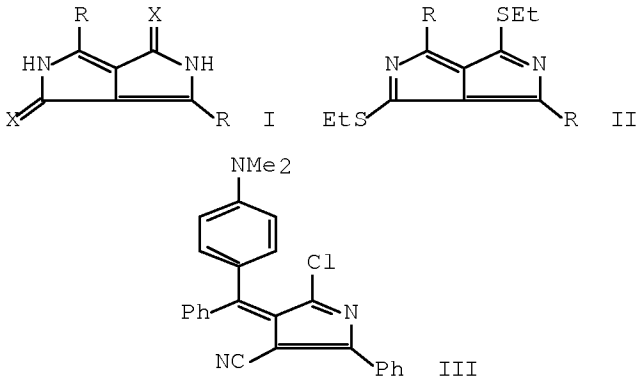
IT 96159-17-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(IR and visible spectra and thermal decomposition of)

RN 96159-17-0 CAPLUS

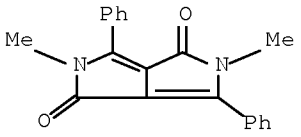
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:439663 CAPLUS Full-text
DOCUMENT NUMBER: 107:39663
TITLE: 2,5-Diazapentalene
AUTHOR(S): Closs, Fritz; Gompper, Rudolf
CORPORATE SOURCE: Inst. Org. Chem., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1987), 99(6), 564-7
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 107:39663
GI



AB The preparation and reactions of 2,5-diazapentalenes were investigated. Thus, diazapentalene I (R = H, X = O) was prepared from H2NCOCH2CH2CONH2 and PhC(OEt)2NMe2. I (R = 3-cyanophenyl, Ph, 4-MeOC6H4; X = O) were treated with P4S10 to give I (X = S), which were alkylated with EtI to give ethylthio derivs. II. I (R = Ph, X = O) was treated with PhNMe2 and POCl3/PCl5 to give pyrrole III.
IT 96159-17-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(sulfurization of)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



L68 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:553051 CAPLUS Full-text
DOCUMENT NUMBER: 105:153051
ORIGINAL REFERENCE NO.: 105:24668h,24669a
TITLE: Pyrrolopyrroledithiones and their use
INVENTOR(S): Rochat, Alain Claude; Iqbal, Abul; Jeanneret, Remy; Mizuguchi, Jin
PATENT ASSIGNEE(S): Ciba-Geigy A.-G. , Switz.
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 187620	A2	19860716	EP 1985-810611		19851223 <--
EP 187620	A3	19880113			
EP 187620	B1	19910417			
R: CH, DE, FR, GB, IT, LI					
JP 61162555	A	19860723	JP 1985-299827		19851228 <--
JP 06019040	B	19940316			
US 4632893	A	19861230	US 1985-815327		19851231 <--
CA 1322758	C	19931005	CA 1985-498823		19851231 <--
US 4760151	A	19880726	US 1986-901864		19860829 <--
PRIORITY APPLN. INFO.:			CH 1985-14	A	19850103 <--
			US 1985-815327	A3	19851231 <--

OTHER SOURCE(S): MARPAT 105:153051
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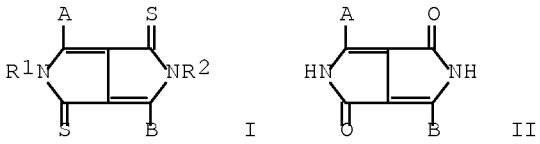
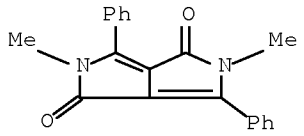


I II

AB The title compds. (I; A, B = alkyl, aralkyl, cycloalkyl, carbocyclic or heterocyclic aromatic groups; R1, R2 = H, H2O-insolubilizing substituents), useful as photoconductors, were prepared by treating dioxo compds. II with thionating agents. Thus, 2.89 g II (A = B = Ph) and 4.95 g 2,4-bis(4-methoxyphenyl)-1,3,2,4-dithiadiphosphetane 2,4-disulfide were refluxed 7 h in xylene containing HMPA to give 3.04 g I (A = B = Ph, R1 = R2 = H). The preparation of photocond. films was given.
IT 96159-17-0
RL: RCT (Reactant); RACT (Reactant or reagent)

(thionation of, with Lawesson's reagent)
RN 96159-17-0 CAPLUS
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-2,5-dimethyl-3,6-diphenyl- (CA INDEX NAME)



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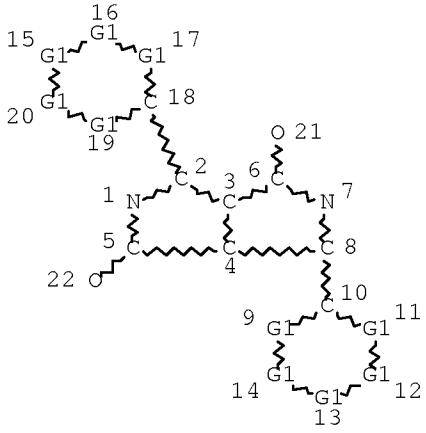


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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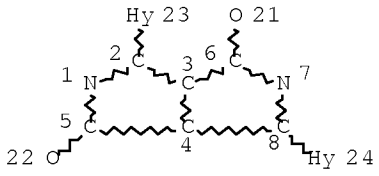


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GRAPH ATTRIBUTES:
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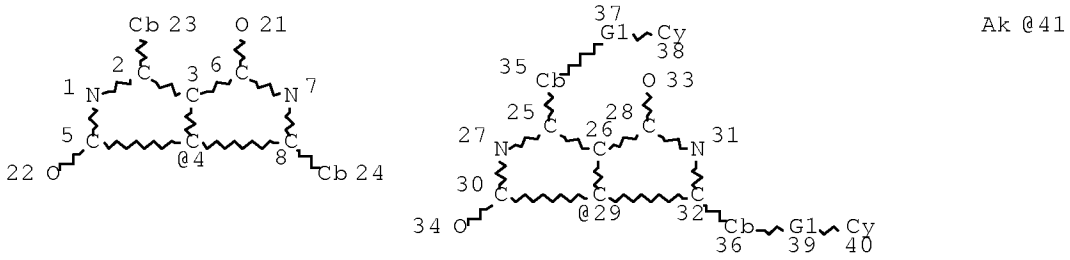

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CONNECT IS E1 RC AT 33
CONNECT IS E1 RC AT 34
CONNECT IS E2 RC AT 41
DEFAULT MLEVEL IS ATOM
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GGCAT IS PCY UNS AT 24
GGCAT IS MCY UNS AT 35
GGCAT IS MCY UNS AT 36
DEFAULT ECLEVEL IS LIMITED
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STEREO ATTRIBUTES: NONE
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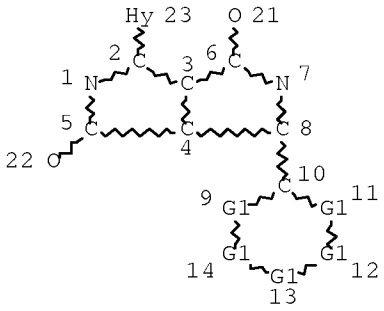

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NODE ATTRIBUTES:
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CONNECT IS E1 RC AT 21
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 23

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STEREO ATTRIBUTES: NONE
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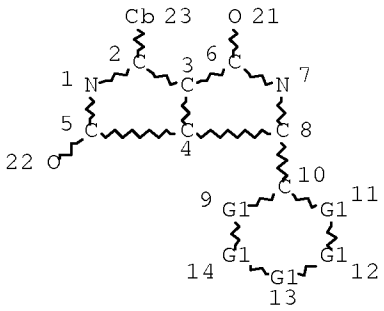

VAR G1=N/C
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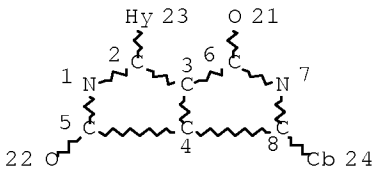
CONNECT IS M1 C AT 7
CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 23
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
L21 STR



NODE ATTRIBUTES:
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CONNECT IS M1 C AT 7

CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 22
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY AT 24
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 23

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
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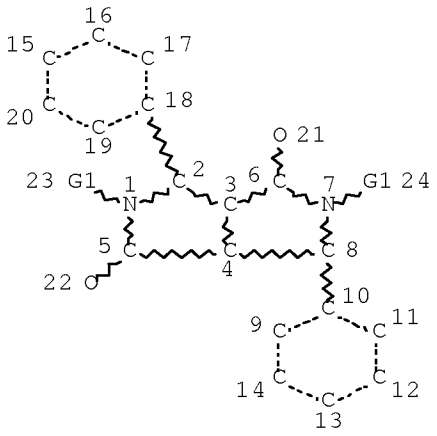

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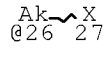

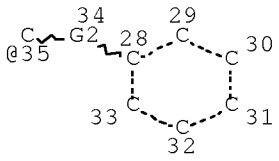

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NUMBER OF NODES IS 35

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L14           7 SEA ABB=ON  L13

     FILE 'REGISTRY' ENTERED AT 10:15:30 ON 05 FEB 2008
L15         663 SEA ABB=ON  L2 NOT (L7 OR L13)
L16         693 SEA SUB=L2 SSS FUL L12 EXTEND
L17         125 SEA SUB=L2 SSS FUL L12
                SAVE TEMP L17 BIA976SUB3/A

     FILE 'ZCAPLUS' ENTERED AT 10:18:55 ON 05 FEB 2008
L18          44 SEA ABB=ON  L17

     FILE 'REGISTRY' ENTERED AT 11:54:47 ON 05 FEB 2008
L19             STR L1
L20             STR L19
L21             STR L19
                D QUE L7
                D QUE L17
L22             STR L1
L23          27 SEA SUB=L2 SSS SAM (L4 OR L12 OR L19 OR L20 OR L21 OR L22)
L24         693 SEA SUB=L2 SSS FUL (L4 OR L12 OR L19 OR L20 OR L21 OR L22)
                EXTEND
L25         481 SEA SUB=L2 SSS FUL (L4 OR L12 OR L19 OR L20 OR L21 OR L22)
                SAVE TEMP L25 BIA976SUB4/A

     FILE 'ZCAPLUS' ENTERED AT 12:02:40 ON 05 FEB 2008
L26         158 SEA ABB=ON  L25
L27             ANALYZE L26 1- RN HIT :     471 TERMS
                D 1-20

     FILE 'REGISTRY' ENTERED AT 12:03:25 ON 05 FEB 2008
L28           1 SEA ABB=ON  96159-17-0
L29         480 SEA ABB=ON  L25 NOT L28

     FILE 'CAPLUS' ENTERED AT 12:46:16 ON 05 FEB 2008
L30          54 SEA ABB=ON  L28
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L31         118 SEA ABB=ON  L29
L32         158 SEA ABB=ON  L25
L33         107 SEA ABB=ON  L32 AND (PY<2003 OR AY<2003 OR PRY<2003)

     FILE 'REGISTRY' ENTERED AT 12:47:36 ON 05 FEB 2008
                 D SCAN L28
L34         417 SEA ABB=ON  L25 NOT PMS/CI
L35          23 SEA SUB=L25 SSS SAM L22
L36         468 SEA SUB=L25 SSS FUL L22 EXTEND
L37         373 SEA SUB=L25 SSS FUL L22
                SAVE TEMP L37 BIA976SUB5/A
L38         108 SEA ABB=ON  L25 NOT L37

     FILE 'CAPLUS' ENTERED AT 12:50:16 ON 05 FEB 2008
L39          33 SEA ABB=ON  L38
L40         144 SEA ABB=ON  L37
                ACT BIA976CAAU/A
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L41 (         1)SEA ABB=ON  US2005-551976/AP
L42             STR
L43 (       693)SEA SSS FUL L42
L44 (       229)SEA ABB=ON  L43
L45 (     15399)SEA ABB=ON  YAMAMOTO H?/AU
L46 (       206)SEA ABB=ON  DAN N?/AU
L47          12 SEA ABB=ON  (L41 OR L45 OR L46) AND L44
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                D SCAN
L48      164421 SEA ABB=ON  FLUORESC?/CW
L49          40 SEA ABB=ON  L40 AND L48
L50       14073 SEA ABB=ON  CHROMOPHORE#/OBI
L51          42 SEA ABB=ON  (L48 OR L50) AND L40

     FILE 'REGISTRY' ENTERED AT 12:58:06 ON 05 FEB 2008
                 D SCAN L28

     FILE 'CAPLUS' ENTERED AT 12:58:07 ON 05 FEB 2008
L52         102 SEA ABB=ON  L40 NOT L51
                D PY 102
L53     1434159 SEA ABB=ON  73/SC,SX
L54       62307 SEA ABB=ON  41/SC,SX
L55          77 SEA ABB=ON  L40 AND (L53 OR L54)
L56          55 SEA ABB=ON  L55 AND L33

     FILE 'CAPLUS' ENTERED AT 13:02:15 ON 05 FEB 2008
                 D QUE NOS L47
                 D IBIB ABS HITSTR L47 1-12

     FILE 'REGISTRY' ENTERED AT 13:03:02 ON 05 FEB 2008

     FILE 'CAPLUS' ENTERED AT 13:03:39 ON 05 FEB 2008
                 SEL HIT RN L47 1-

     FILE 'REGISTRY' ENTERED AT 13:03:49 ON 05 FEB 2008
L57         105 SEA ABB=ON  (331678-08-1/BI OR 331678-10-5/BI OR 331678-14-9/BI
                 OR 331687-86-6/BI OR 361196-18-1/BI OR 474067-56-6/BI OR
                482373-47-7/BI OR 482373-48-8/BI OR 482373-49-9/BI OR 575451-54
                -6/BI OR 128318-51-4/BI OR 205104-13-8/BI OR 331678-09-2/BI OR
                331678-11-6/BI OR 331678-12-7/BI OR 331678-13-8/BI OR 331678-16
                -1/BI OR 331678-18-3/BI OR 331687-77-5/BI OR 331687-83-3/BI OR
                331687-85-5/BI OR 368868-28-4/BI OR 427375-50-6/BI OR 432552-48
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                -2/BI OR 440371-56-2/BI OR 474067-66-8/BI OR 477719-73-6/BI OR
                482373-51-3/BI OR 482373-52-4/BI OR 482373-53-5/BI OR 482373-54
                -6/BI OR 482373-55-7/BI OR 488134-84-5/BI OR 532952-72-0/BI OR
                575451-55-7/BI OR 575451-56-8/BI OR 575451-57-9/BI OR 575451-58
                -0/BI OR 575451-59-1/BI OR 575451-60-4/BI OR 575451-61-5/BI OR
                575451-62-6/BI OR 575451-63-7/BI OR 575451-64-8/BI OR 575451-65
                -9/BI OR 575451-66-0/BI OR 575451-67-1/BI OR 575451-68-2/BI OR
                575451-69-3/BI OR 575451-70-6/BI OR 575451-71-7/BI OR 575451-72
                -8/BI OR 575451-73-9/BI OR 575451-74-0/BI OR 575451-75-1/BI OR
                575451-76-2/BI OR 575451-77-3/BI OR 575451-78-4/BI OR 575451-79
                -5/BI OR 575451-80-8/BI OR 575451-81-9/BI OR 575451-82-0/BI OR
                575451-83-1/BI OR 575451-84-2/BI OR 575451-85-3/BI OR 575451-86
                -4/BI OR 575451-87-5/BI OR 575451-88-6/BI OR 777079-51-3/BI OR
                777079-52-4/BI OR 777079-53-5/BI OR 777079-54-6/BI OR 777079-62
                -6/BI OR 777079-63-7/BI OR 777079-64-8/BI OR 777079-65-9/BI OR
                777079-66-0/BI OR 777079-67-1/BI OR 778591-37-0/BI OR 778591-38
                -1/BI OR 853276-29-6/BI OR 890134-23-3/BI OR 890134-24-4/BI OR
                890134-25-5/BI OR 890134-26-6/BI OR 890134-28-8/BI OR 890134-29
                -9/BI OR 890134-30-2/BI OR 890134-31-3/BI OR 890134-32-4/BI OR
                890134-33-5/BI OR 890134-35-7/BI OR 890134-36-8/BI OR 890134-37
                -9/BI OR 890134-38-0/BI OR 918413-00-0/BI OR 918413-02-2/BI OR
                918413-03-3/BI OR 918413-04-4/BI OR 918413-06-6/BI OR 918413-07
                -7/BI OR 918413-41-9/BI OR 96158-98-4/BI OR 96159-14-7/BI OR
                96159-17-0/BI)
L58          36 SEA ABB=ON  L57 AND L37

     FILE 'CAPLUS' ENTERED AT 13:04:05 ON 05 FEB 2008
L59          76 SEA ABB=ON  L58
L60          36 SEA ABB=ON  L31 AND L59

     FILE 'REGISTRY' ENTERED AT 13:06:57 ON 05 FEB 2008
                D STAT QUE L37
                D QUE NOS L38

     FILE 'CAPLUS' ENTERED AT 13:07:07 ON 05 FEB 2008
                D QUE NOS L39
L61          24 SEA ABB=ON  L39 NOT L47
                D QUE NOS L33
L62          18 SEA ABB=ON  L33 AND L61
                D IBIB ABS HITSTR 1-18

     FILE 'REGISTRY' ENTERED AT 13:08:29 ON 05 FEB 2008
                D STAT QUE L37

     FILE 'CAPLUS' ENTERED AT 13:08:36 ON 05 FEB 2008
                D QUE NOS L51
L63          34 SEA ABB=ON  L51 NOT (L62 OR L47)
L64          20 SEA ABB=ON  L63 AND L33
                D IBIB ABS HITIND HITSTR 1-20
                D QUE NOS L60
L65          21 SEA ABB=ON  L60 NOT (L47 OR L62 OR L64)
L66          15 SEA ABB=ON  L65 AND L33
                D IBIB ABS HITSTR 1-15 L66
                D QUE NOS L30
L67          33 SEA ABB=ON  L30 NOT (L47 OR L62 OR L64 OR L66)
L68          14 SEA ABB=ON  L67 AND L33
                D IBIB ABS HITSTR 1-14

     FILE 'HOME' ENTERED AT 13:10:47 ON 05 FEB 2008
                D STAT QUE L37
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